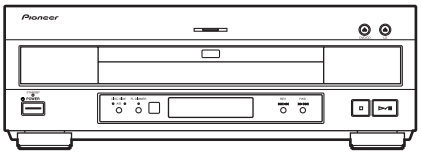
Service Manual



ORDER NO.
RRV2089

DVD LD PLAYER

DVL-919

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Region No.	The voltage can be converted by the following method.
	DVL-919			
KU/CA	○	AC120V	1	————————
RD/RA	○	AC110-127/220-240V	1	Automatic select

CONTENTS

1. SAFETY INFORMATION ····· 2
2. EXPLODED VIEWS AND PARTS LIST ····· 4
3. SCHEMATIC DIAGRAM ····· 16
4. PCB CONNECTION DIAGRAM ····· 42
5. PCB PARTS LIST ····· 58
6. ADJUSTMENT ····· 65
7. GENERAL INFORMATION ····· 80
   7.1 PARTS ····· 80
      7.1.1 IC ····· 80
   7.2 DISASSEMBLY/ASSEMBLY ····· 82
   7.3 BLOCK DIAGRAM ····· 84
8. PANEL FACILITIES AND SPECIFICATIONS ···· 86

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

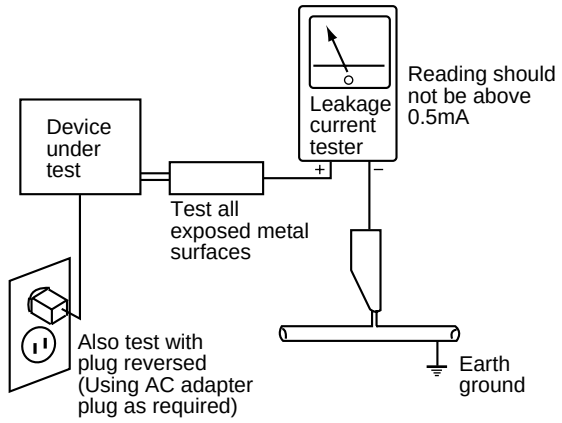
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

IMPORTANT

THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS

•FOR DVD
MAXIMUM OUTPUT POWER : 7 mW
WAVELENGTH : 650 nm
•FOR CD/LD
MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 780-785 nm

Additional Laser Caution

1. The ON/OFF statuses of the side-A/B detection switch (Lever switch connecting to the TNMB assy), slider-position detection switches (INNER and OUTER on the PKSB assy), loading-status detection switches (SW1, 2 and 3 on the LMSB assy), side B inside detection switch (S901 on the BISB assy) and CLD pickup active detection switch (S903 on the LCSB assy) are detected by the microprocessor (IC101 in the CLDM assy). Also the DVD pickup active detection switch (S902 on the DCSB assy) is detected by the microprocessor (IC501 in the DVDM assy).
   • To permit the laser diode of CLD pickup to oscillate, it is required to set the CLD pickup active detection switch (S903 : OFF) and the slider-position detection switches for the LD ACTIVE status (INNER : OFF, OUTER: OFF), and to set the loading-status detection switches for tilt neutral state (SW1 : ON, SW2 : OFF, SW3 : ON). As long as these requirements are not satisfied, the laser diode will not oscillate. When the requirements are met in any way, the laser diode can oscillate. The laser diode oscillation will continue if pin 13 of IC801 is shorted to GND or the emitter and collector of Q834 are shorted each other (fault condition) in the CLDM assy.
   • To permit the laser diode of DVD pickup to oscillate, it is required to set the DVD pickup active detection switch (S902 :OFF) and each switch and a state of laser diode are contents same as state of CLD pickup mentioned above. The laser diode oscillation will continue if pin 13 of IC101 is shorted to +5V (fault condition) in the DVDM assy.
   In the test mode ∗, the laser diode oscillates when the microprocessor detects a PLAY signal, or when the PLAY key is pressed (S104 ON in the FLKY assy), with the above requirements satisfied.

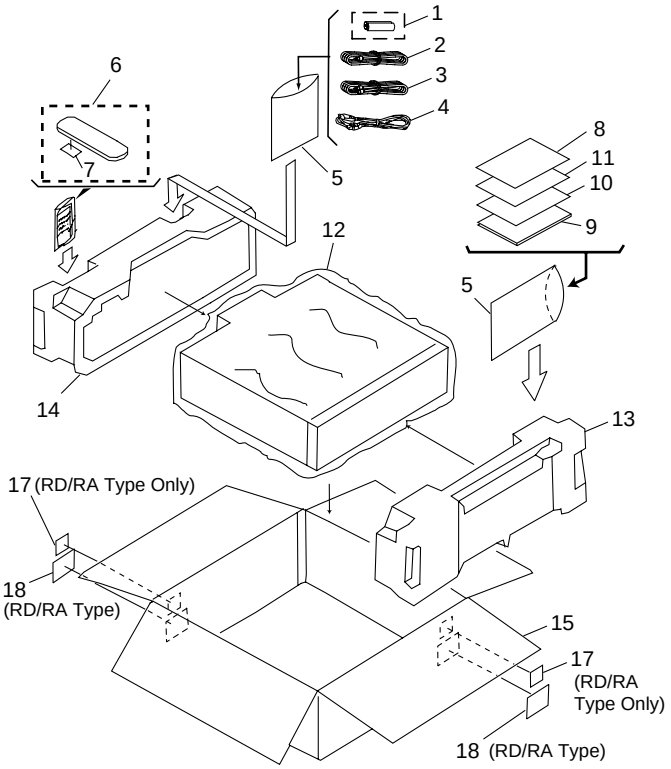
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

∗ : Refer to page 68.

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screws adjacent to ▼ mark on product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

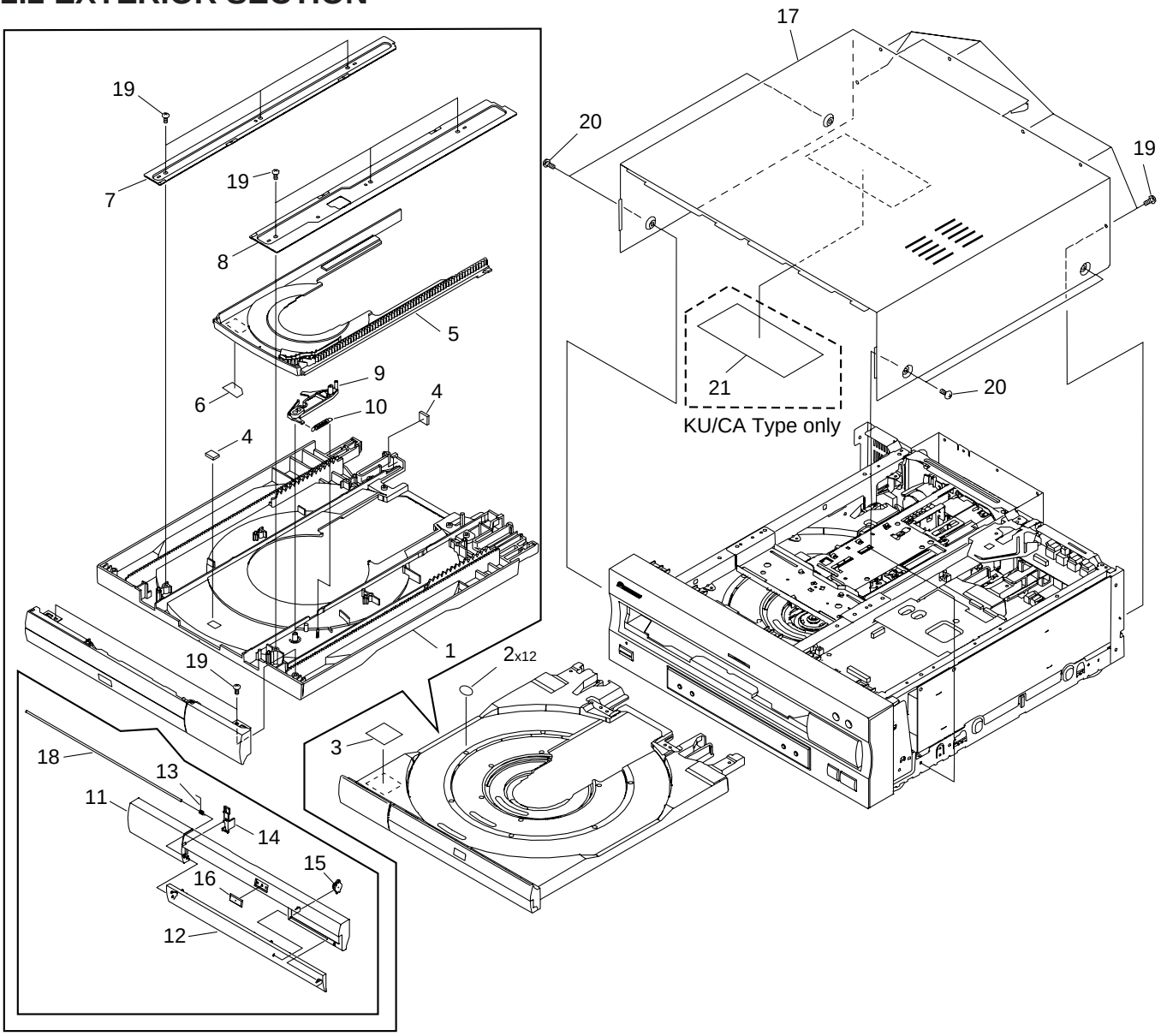
Mark	No.	Description	Part No.
NSP	1	DRY CELL BATTERY(R6P,AA)	VEM-013
	2	VIDEO CORD(L=1.5m)	VDE1036
	3	AUDIO CORD(L=1.5m)	VDE1033
⚠	4	POWER CORD	See Contrast table (2)
	5	POLYETHYLENE BAG	Z21-038
	6	REMOTE CONTROL UNIT (CU-DV030)	VXX2609
	7	BATTERRY COVER	VNK3703
NSP	8	CAUTION	VRM1063
	9	OPERATING INSTRUCTIONS (English/French)	VRB1202
	10	ERRATA	VRX1031
NSP	11	WARRANTY CARD	See Contrast table (2)
	12	MIRROR MAT SHEET	VHL1018
	13	PAD F	VHA1226
	14	PAD R	VHA1227
	15	PACKING CASE	See Contrast table (2)
	16	• • • • •	
	17	REGION LABEL P1	See Contrast table (2)
	18	RD/RA LABEL	See Contrast table (2)

(2) CONTRAST TABLE

DVL-919/KU/CA and RD/RA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			KU/CA type	RD/RA type	
⚠	4	POWER CORD	ADG7021	ADG7003	
NSP	11	WARRANTY CARD	ARY7023	ARY7025	
	15	PACKING CASE	VHG1768	VHG1770	
	17	REGION LABEL P1	Not used	VRW1708	
	18	RD/RA LABEL	Not used	VRW1711	

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

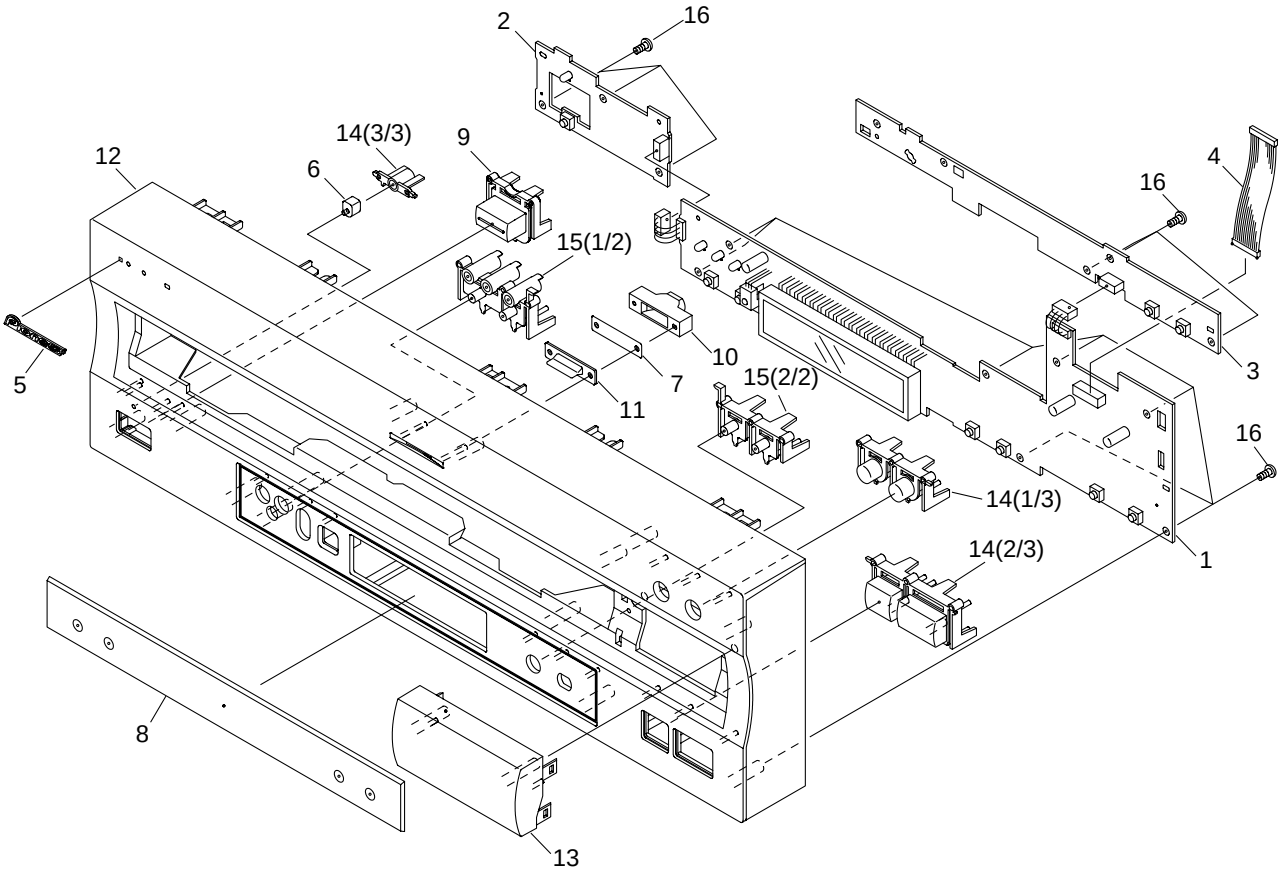
Mark	No.	Description	Part No.
	1	LD TRAY ASSY	VXA2173
	2	CUSHION	VEC1682
NSP	3	CARRY LABEL	VRW1289
	4	DAMP CUSHION	VEC1683
	5	CD TRAY	VNK3922
	6	TRAY LABEL	VRW1628
	7	GUIDE PLATE (R)	VNE1939
	8	GUIDE PLATE (L)	VNE1938
	9	LOCK PLATE	VNL1703
	10	LOCK PLATE SPRING	VBH1188
	11	TRAY PANEL	VNK4355
	12	DVD DOOR	VNK4356
	13	DOOR SPRING	VBH1248
	14	DOOR HOLDER	VNL1817
	15	DAMPER ASSY	VXA1999
	16	DVD PLATE	VAM1075
	17	BONNET CASE S	VXX2561
	18	DOOR SHAFT	VLL1506
	19	SCREW	BBZ30P080FMC
	20	SCREW	BCZ40P060FZK
	21	65 LABEL	See Contrast table (2)

(2) CONTRAST TABLE

DVL-919/KU/CA and RD/RA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			KU/CA type	RD/RA type	
	21	65 LABEL	ARW7050	Not used	

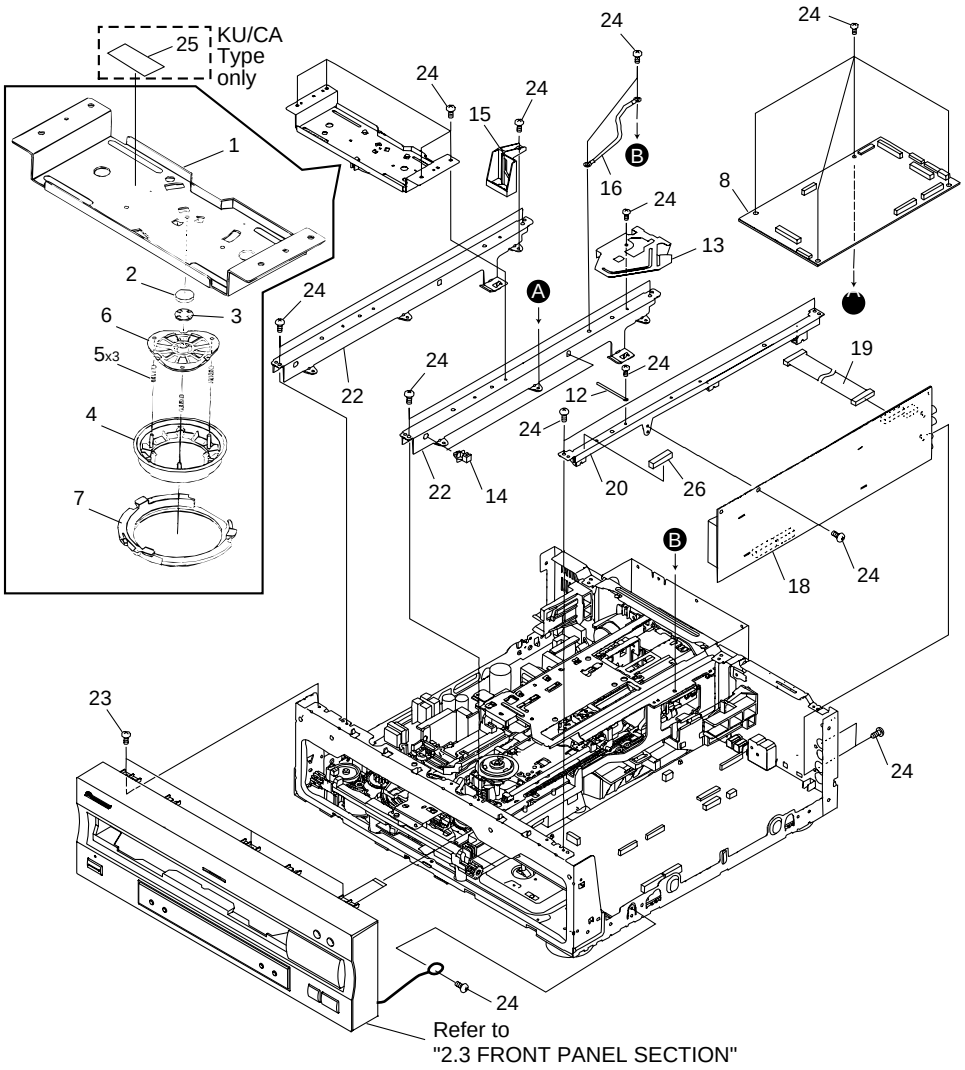
2.3 FRONT PANEL SECTION



● FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	FLKY ASSY	VWG2005
NSP	2	PWSB ASSY	VWG1994
NSP	3	DILB ASSY	VWG1995
	4	FLEXIBLE CABLE (14P)	VDA1638
	5	NAME PLATE	PAM1776
	6	LED LENS	PNW2019
	7	ILLUMINATION FILTER	VEC1950
	8	FL LENS	VEC2015
	9	POWER BUTTON	VNK4101
	10	ILLUMI HOLDER	VNK4098
	11	ILLUMINATION LENS	VNK4168
	12	FRONT PANEL	VNK4352
	13	SUB PANEL	VNK4415
	14	PLAY BUTTON	VNK4354
	15	OPERATION BUTTON	VNK4349
	16	SCREW	BBZ30P080FMC

2.4 TOP VIEW SECTION



(1) TOP VIEW SECTION PARTS LIST

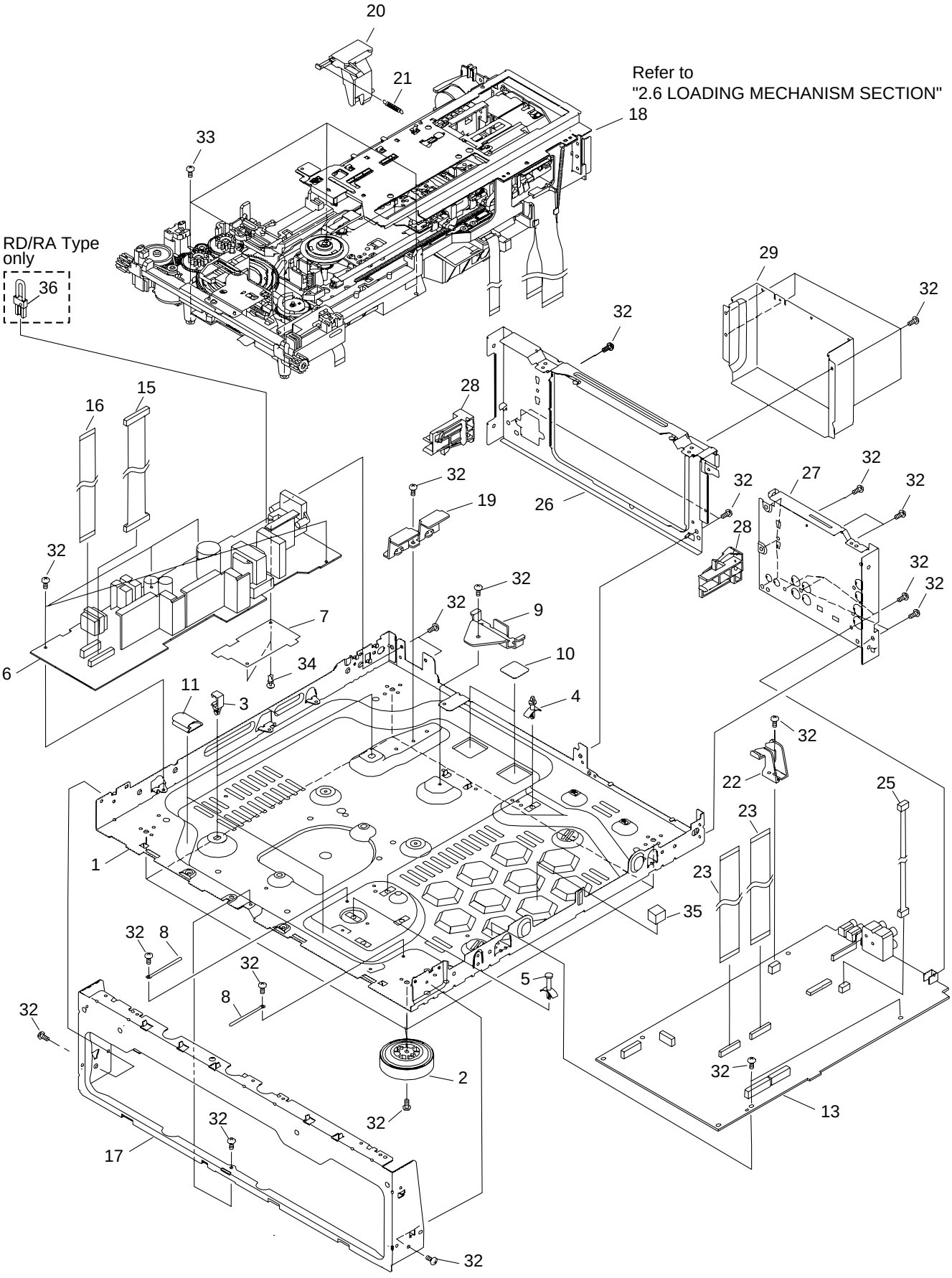
Mark	No.	Description	Part No.
	1	CENTER PLATE	VNE2127
	2	RUBBER MAT	VEB1114
	3	THRUST HOLDER	VNL1663
	4	CLAMPER	VNL1648
	5	CLAMPER SPRING	VBH1192
	6	CLAMPER HEAD	VNL1649
	7	CLAMPER HOLDER	VNL1788
	8	DVDM ASSY	VWS1377
	9	• • • • •	
	10	• • • • •	
	11	• • • • •	
	12	CORD CLAMPER	RNH-184
	13	CABLE HOLDER	VEC1958
NSP	14	CORNER POST	DEC1212
	15	SHIPPING CAM	VNL1729
NSP	16	CORD WITH PLUG	DE007VF0
	17	• • • • •	
	18	GYCB ASSY	VWV1633
	19	HOUSING ASSY(13P)	VKP2196
NSP	20	PCB-HOLDER	VNE2164
	21	• • • • •	
NSP	22	CENTER ANGLE	VNE2126
	23	SCREW	IBZ30P080FMC
	24	SCREW	BBZ30P080FMC
	25	FUSE CAUTION LABEL	See Contrast table (2)
	26	CUSHION	VEC1982

(2) CONTRAST TABLE

DVL-919/KU/CA and RD/RA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			KU/CA type	RD/RA type	
	25	FUSE CAUTION LABEL	VRW1695	Not used	

2.5 BOTTOM VIEW SECTION



(1) BOTTOM VIEW SECTION PARTS LIST

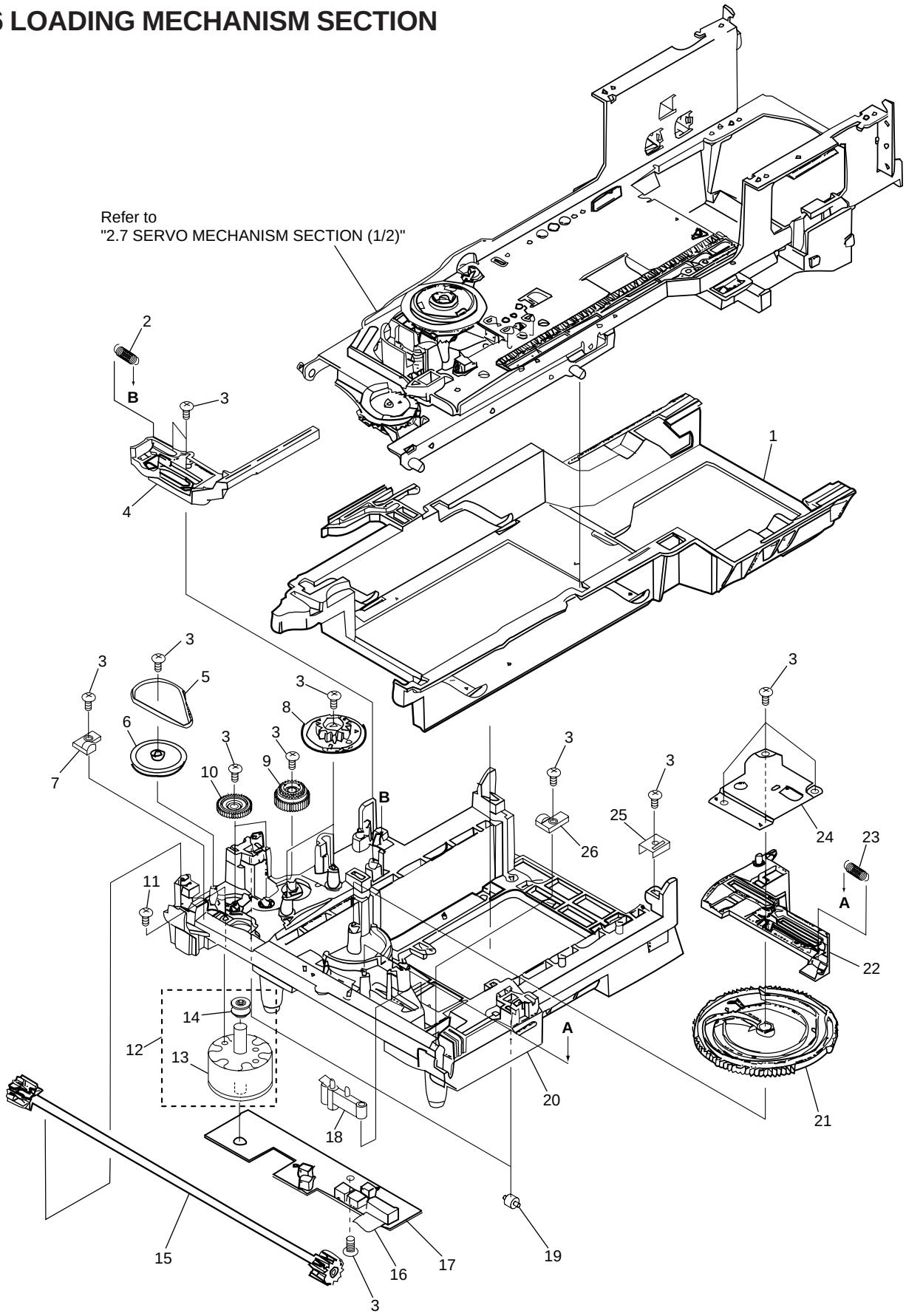
Mark	No.	Description	Part No.
NSP	1	CHASSIS	VNA1887
	2	INSULATOR ASSY	VXA2356
	3	PCB HINGE	VEC1174
NSP	4	PCB SPACER	AEC1188
NSP	5	CIRCUIT BOARD SPACER	VEC1957
⚠	6	POWER SUPPLY ASSY	See Contrast table (2)
	7	SHEET P	VEC1874
	8	CORD CLAMPER	RNH-184
NSP	9	STOPPER	VNE2088
	10	SPACER	VEC1939
	11	SHELL CLIP	DEC1184
	12	• • • • •	
	13	CLDM ASSY	VWS1358
	14	• • • • •	
	15	HOUSING ASSY (14P)	VKP2151
	16	FLEXIBLE CABLE(15P)	VDA1644
NSP	17	PANEL HOLDER	VNA1686
NSP	18	MECHANISM ASSY	VWT1149
NSP	19	CAM HOLDER L	VNE2089
	20	SHIPPING LEVER	VNL1728
	21	SHIPPING SPRING	VBH1275
NSP	22	CAM HOLDER R	VNE2090
	23	FLEXIBLE CABLE(22P)	VDA1652
	24	• • • • •	
	25	HOUSING ASSY (4P)	VKP2195
	26	REAR PANEL R	VNA1892
	27	REAR PANEL L	VNA2027
	28	TRAY STOPPER	VNL1707
	29	REAR COVER	See Contrast table (2)
	30	• • • • •	
	31	• • • • •	
	32	SCREW	BBZ30P080FMC
	33	SCREW	BBZ30P100FMC
	34	RIVET	RBM-003
NSP	35	SPACER	VEC1989
NSP	36	HOUSING ASSY	See Contrast table (2)

(2) CONTRAST TABLE

DVL-919/KU/CA and RD/RA are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.		Remarks
			KU/CA type	RD/RA type	
⚠	6	POWER SUPPLY ASSY	VWR1286	VWR1287	
	29	REAR COVER	VNA2028	VNA2056	
NSP	36	HOUSING ASSY	Not used	VKP2189	

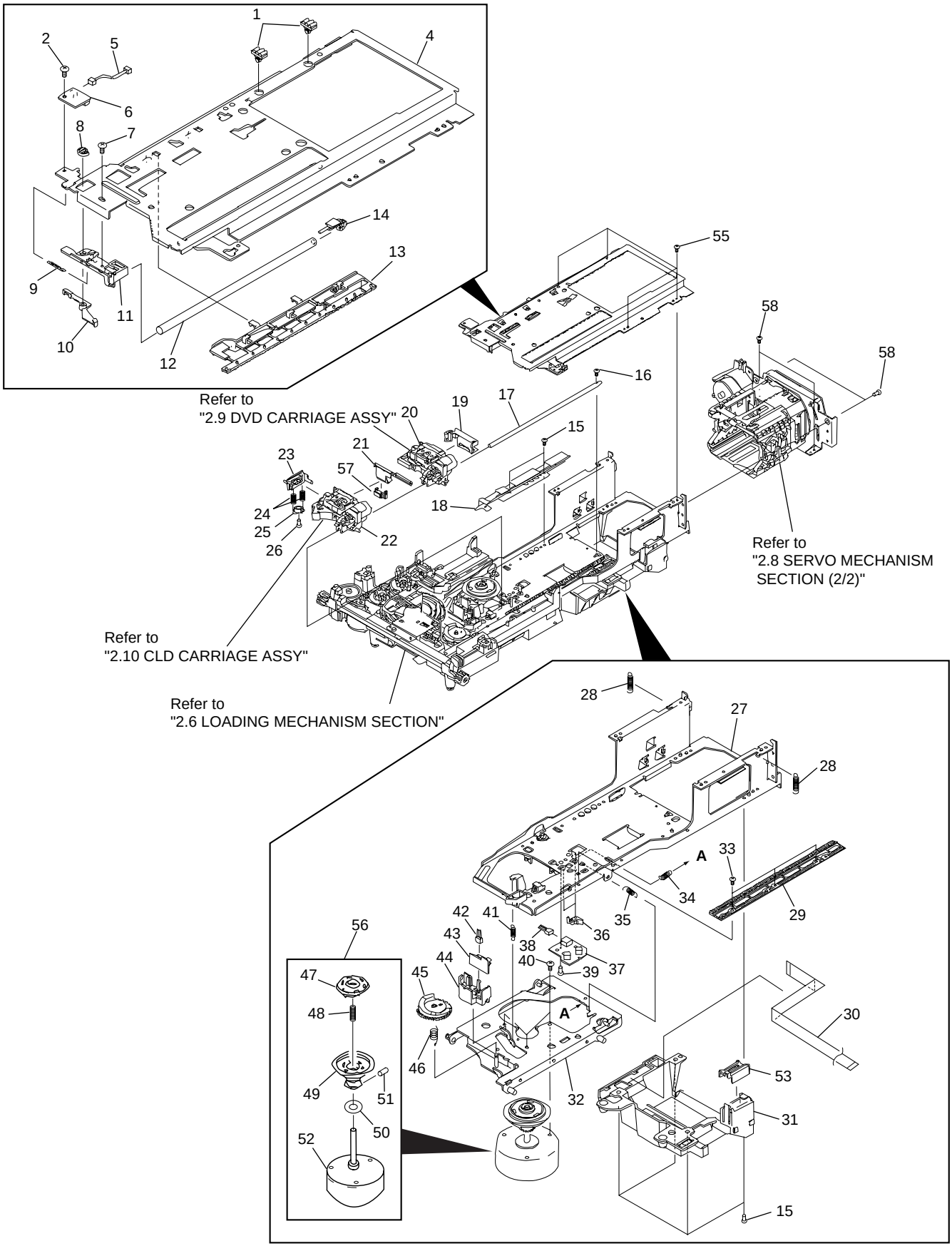
2.6 LOADING MECHANISM SECTION



● LOADING MECHANISM SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Clamp Cam B	VNL1765
	2	CDP Spring	VBH1191
	3	Screw	Z39-019
	4	CD Plate	VNL1685
	5	Rubber Belt	VEB1184
	6	Gear Pulley	VNL1662
	7	Slider (L)	VNL1665
	8	Twin Gear	VNL1626
	9	Center Gear	VNL1660
	10	Double Gear	VNL1661
	11	Screw	BMZ26P040FMC
	12	Loading Motor Assy	VXX2045
	13	Carriage Motor	VXM1033
NSP	14	Motor Pulley	VNL1630
	15	Synchro Gear Assy	VXA2105
	16	Flexible Cable (10P)	VDA1645
NSP	17	LMSB Assy	VWG1554
	18	MB Switch Lever	VNL1664
	19	Roller	VNL1042
	20	Mechanism Base	VNK3239
	21	Cam Gear	VNL1625
	22	Cam Plate	VNL1631
	23	CAS Spring	VBH1190
	24	Shaft Holder	VNE1942
	25	CAM Holder	VNE2032
	26	Slider (R)	VNL1666

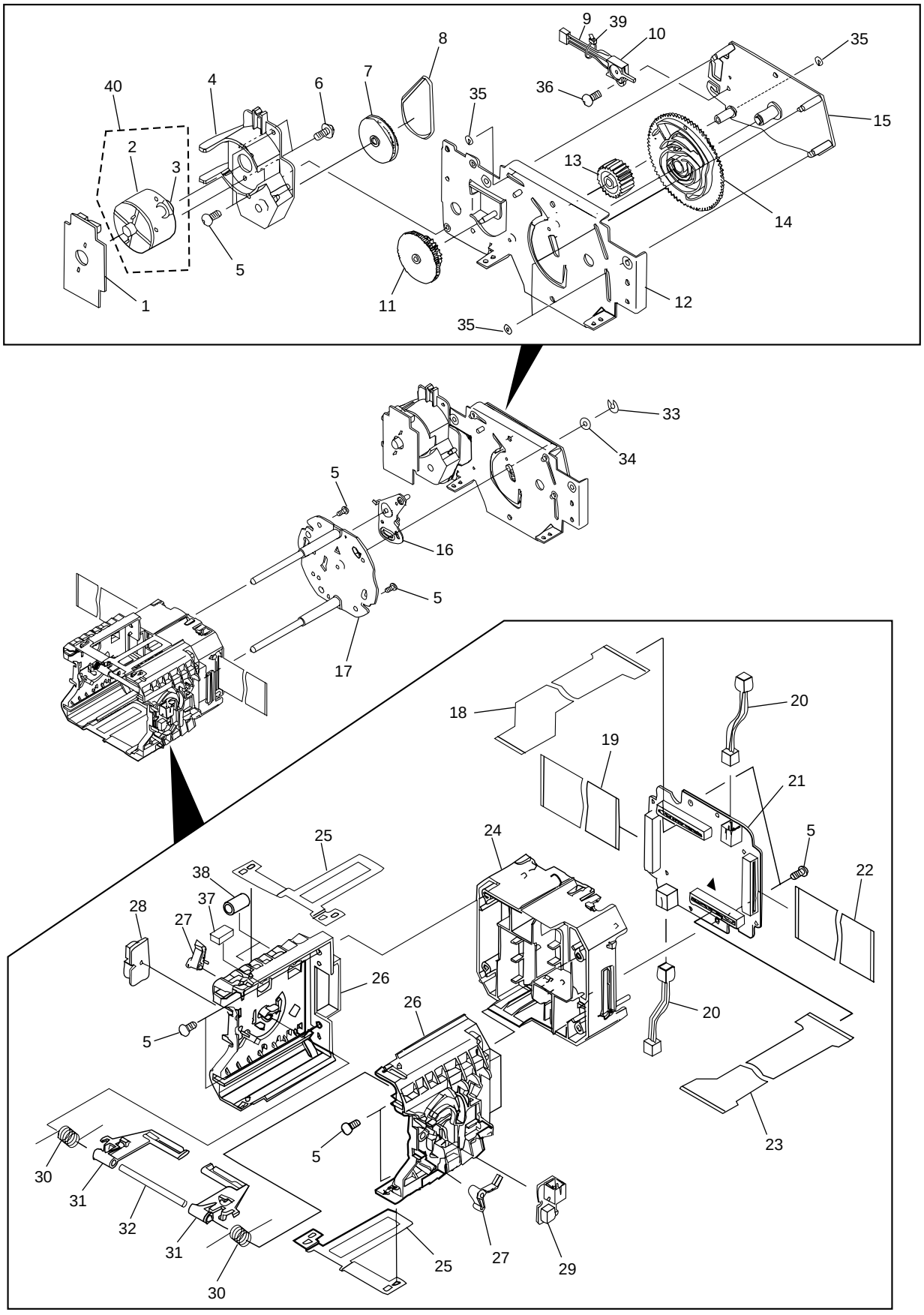
2.7 SERVO MECHANISM SECTION (1/2)



● SERVO MECHANISM SECTION (1/2) PARTS LIST

Mark	No.	Description	Part No.
	1	Mini Clamp	VEC2030
	2	Screw	BBZ26P060FMC
	3	• • • • •	
	4	Tilt Base (Upper)	VNE2062
	5	Housing Assy (2P)	VKP2136
NSP	6	BISB Assy	VWG1796
	7	Screw	BPZ20P040FZK
	8	B Cam	VNL1725
	9	Support Spring	VBH1273
	10	SW Lever B	VNL1723
	11	Shaft Holder	VNL1724
	12	CA Shaft (Upper)	VLL1486
	13	CA Rack (Upper)	VNL1722
	14	Shaft Stay	VNL1726
	15	Screw	BBZ30P080FMC
	16	Screw	PPZ20P060FMC
	17	CA Shaft (Lower)	VLL1496
	18	TAN Guide	VNE2061
	19	FPC Holder A	VNL1751
⚠	20	DVD Carriage Assy	VWT1146
	21	FPC Holder B	VNL1801
⚠	22	CLD Carriage Assy	VWT1141
	23	CA Guide	VNL1668
	24	TAN Spring (B)	VBH1264
	25	TAN Lever (B)	VNL1669
	26	Screw	PMZ20P060FZK
	27	Tilt Base (Under)	VNL1711
	28	Tilt Rear Spring	VBH1274
	29	CA Rack (Lower)	VNL1712
	30	Flexible Cable (6P)	VDA1642
	31	Flexible Cable Cover	VNL1727
	32	Motor Base	VNE1941
	33	Screw	IBZ26P060FMC
	34	Tilt Spring	VBH1263
	35	Thrust Spring	VBH1245
	36	CA Switch Lever	VNL1644
NSP	37	PKSB Assy	VWG1555
	38	Housing Assy (3P)	VKP2045
	39	Screw	IBZ26P120FMC
	40	Screw	PMA30P050FMC
	41	Tilt Spring B	VBH1287
	42	Housing Assy (3P)	VKP2046
NSP	43	FG Assy	VWG1556
	44	FG Base	VNL1781
	45	Tilt Cam	VNL1643
	46	Tilt Cam Spring	VBH1243
	47	PRC Hub	VNL1684
	48	Centering Spring	VBH1269
	49	R Turn Table Assy	VXA2354
NSP	50	Oil Stopper	VBF1002
	51	Screw	ZMD30H030FBT
NSP	52	Spindle Motor	VXM1057
	53	Cover S	VNL1780
	54	• • • • •	
	55	Screw	BBZ30P050FZK
	56	Spindle Motor Assy	VXX2579
	57	FPC Holder	VNL1789
	58	Screw	BCZ30P080FMC

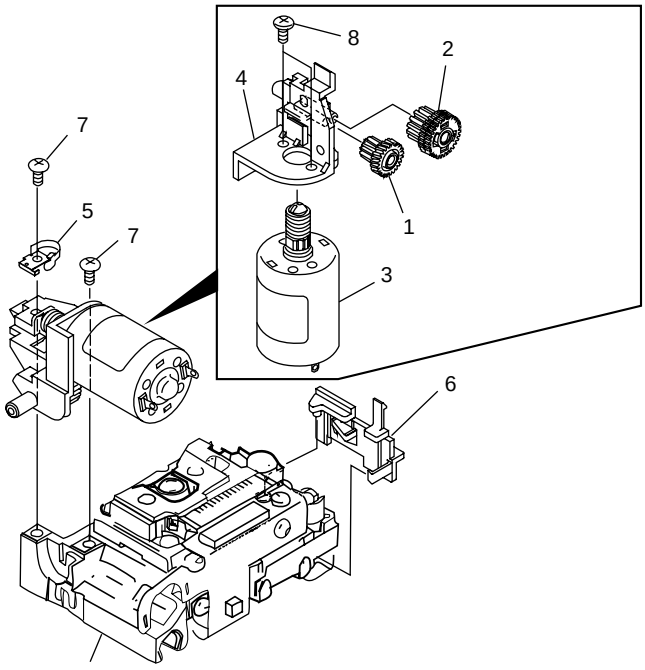
2.8 SERVO MECHANISM SECTION (2/2)



● SERVO MECHANISM SECTION (2/2) PARTS LIST

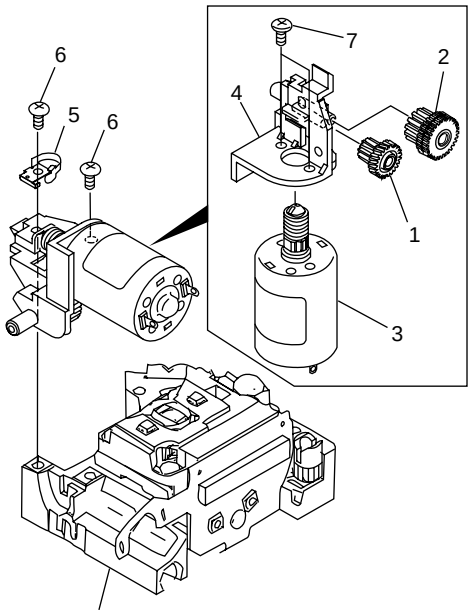
Mark	No.	Description	Part No.
NSP	1	TNMB Assy	VWG1793
	2	Carriage Motor	VXM1033
NSP	3	Motor Pulley	VNL1630
	4	Motor Holder	VNL1717
	5	Screw	BBZ30P080FMC
	6	Screw	BMZ26P040FMC
	7	Gear Pulley	VNL1662
	8	Rubber Belt	VEB1184
	9	Housing Assy (3P)	VKP2137
	10	Lever Switch	DSK1003
	11	Middle Gear	VNL1720
	12	Turn Panel Assy	VXA2337
	13	Gear S	VNL1719
	14	Turn Cam Gear	VNL1718
	15	Swing Plate Assy	VXA2289
	16	Turn Lever Assy	VXA2292
	17	Turn Plate Assy	VXA2290
	18	PU FPC-B	VNP1583
	19	Flexible Cable (26P)	VDA1653
	20	Connector Assy	PG02KK-E10
NSP	21	CNNB Assy	VWG1792
	22	Flexible Cable (27P)	VDA1643
	23	PU FPC-A	VNP1582
	24	PCB Holder	VNL1716
	25	FC Guide	VNE2059
	26	PU Holder	VNL1715
	27	SW Lever C	VNL1714
NSP	28	LCSB Assy	VWG1795
NSP	29	DCSB Assy	VWG1794
	30	FC Arm Spring	VBH1272
	31	FC Arm	VNL1713
	32	Tilt Shaft	VLL1175
	33	E Ring	YE30FUC
	34	Washer	WA42D080D050
	35	Washer	WT26D070D050
	36	Screw	PMA26P060FMC
	37	Cushion	VEC1917
	38	Tube	VEB1273
	39	Binder	Z09-056
	40	Loading Motor Assy	VXX2045

2.9 DVD CARRIAGE ASSY



This part is no service part.

2.10 CLD CARRIAGE ASSY



This part is no service part.

● DVD CARRIAGE ASSY PARTS LIST

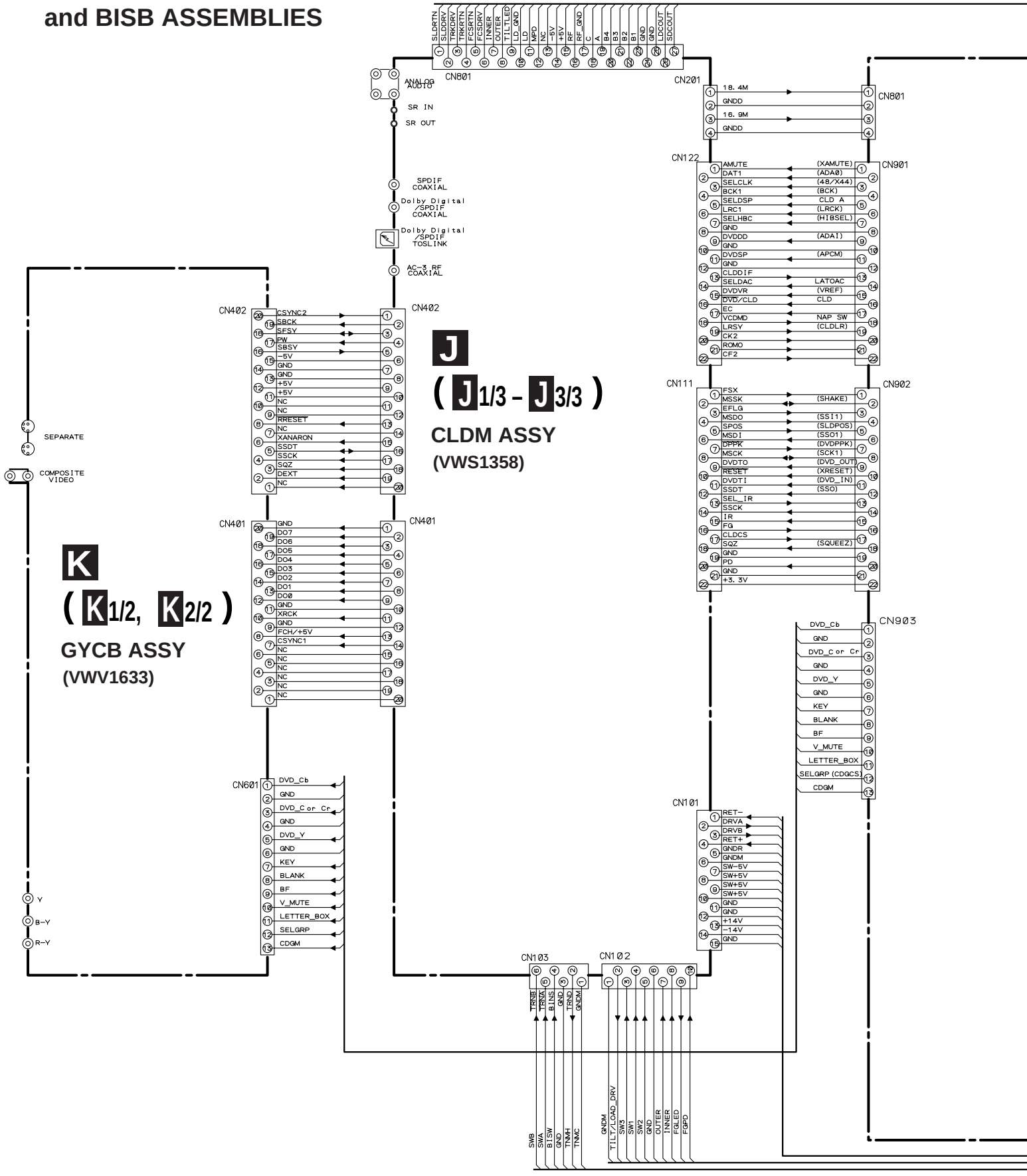
Mark	No.	Description	Part No.
	1	CA Gear (A)	VNL1782
	2	CA Gear B Assy	VXX2471
	3	Slider Motor Assy	VXX2472
	4	Motor Holder	VNL1779
	5	Thrust Holder	VBK1058
	6	CA Guide B	VNL1721
	7	Screw	BBZ20P050FZK
	8	Screw	PMA20P033FUC

● CLD CARRIAGE ASSY PARTS LIST

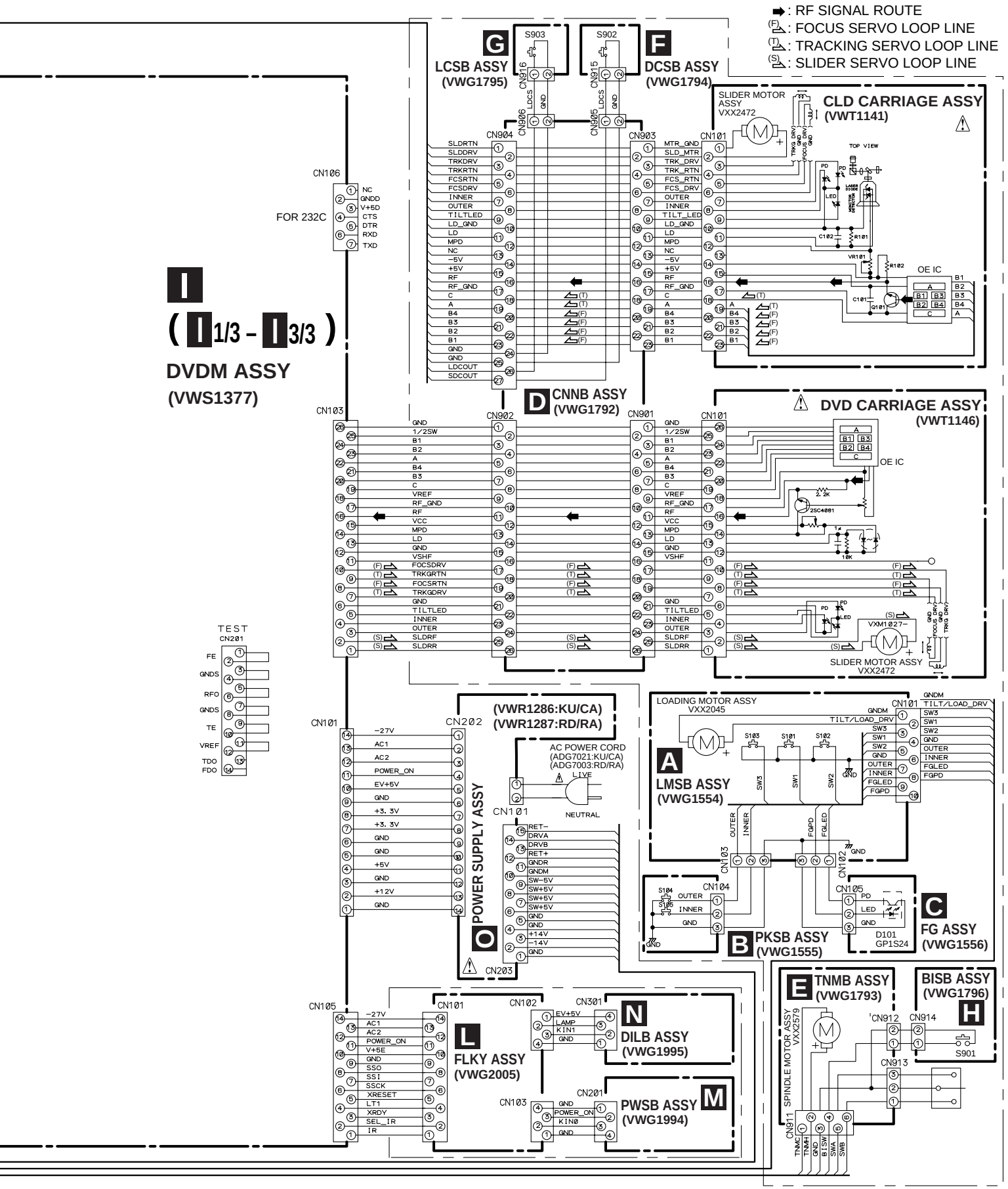
Mark	No.	Description	Part No.
	1	CA Gear (A)	VNL1782
	2	CA Gear (B)	VNL1639
	3	Slider Motor Assy	VXX2472
	4	Motor Holder	VNL1779
	5	Thrust Holder	VBK1058
	6	Screw	PBZ20P050FMC
	7	Screw	PMA20P033FUC

3. SCHEMATIC DIAGRAM

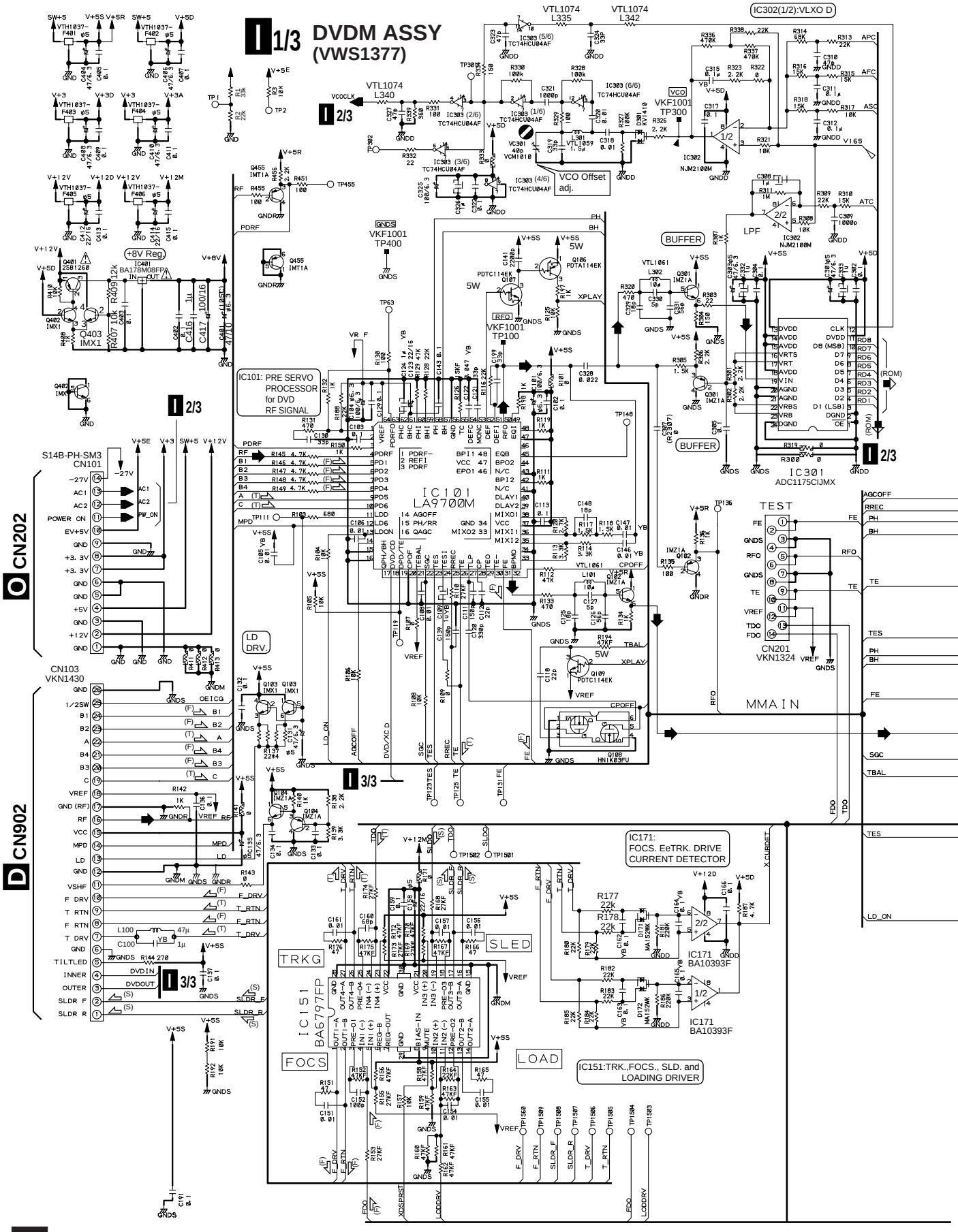
3.1 OVERALL WIRING DIAGRAM, LMSB, PKSB, FG, CNNB, TNMB, DCSB, LCSB and BISB ASSEMBLIES

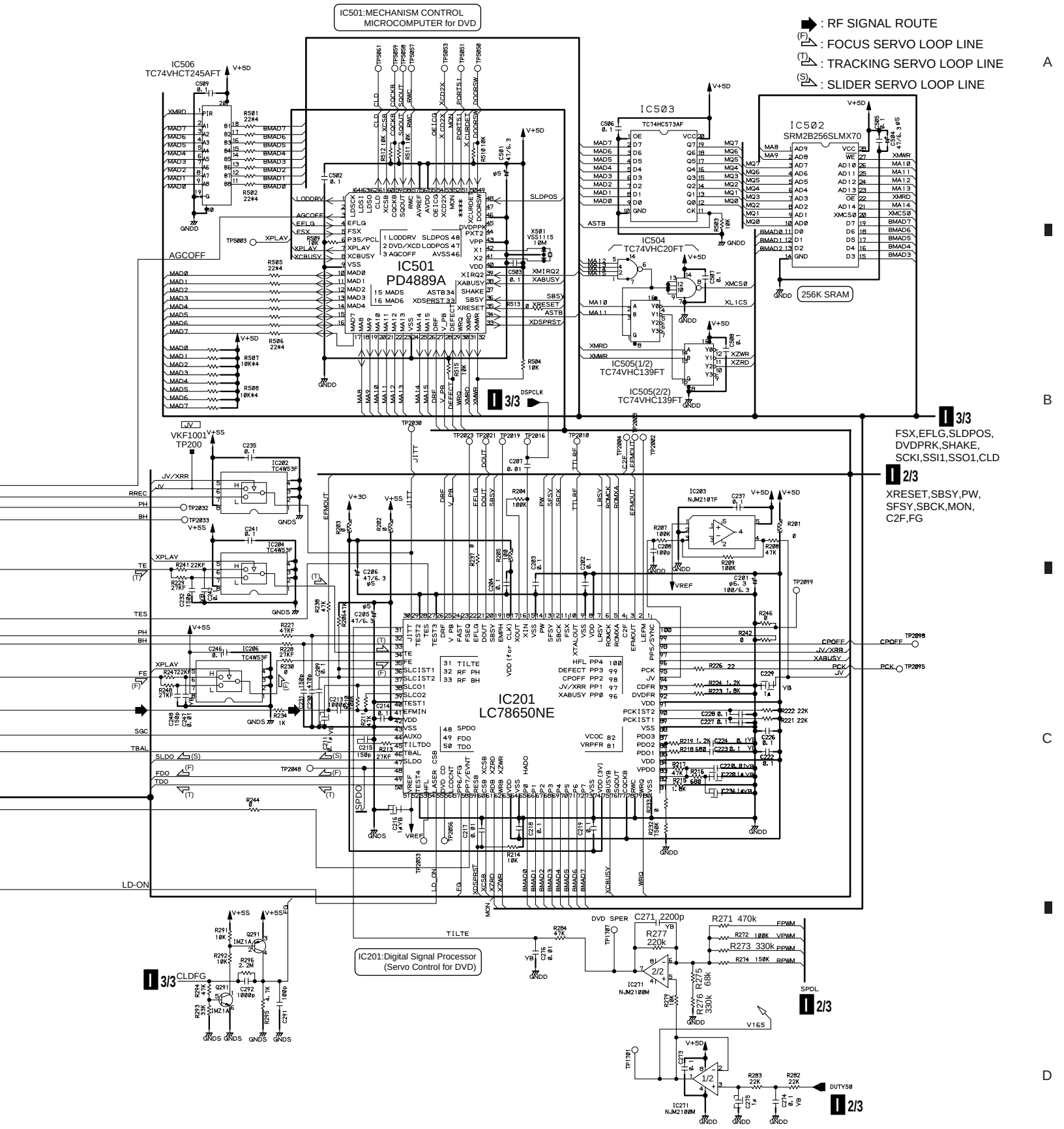


Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

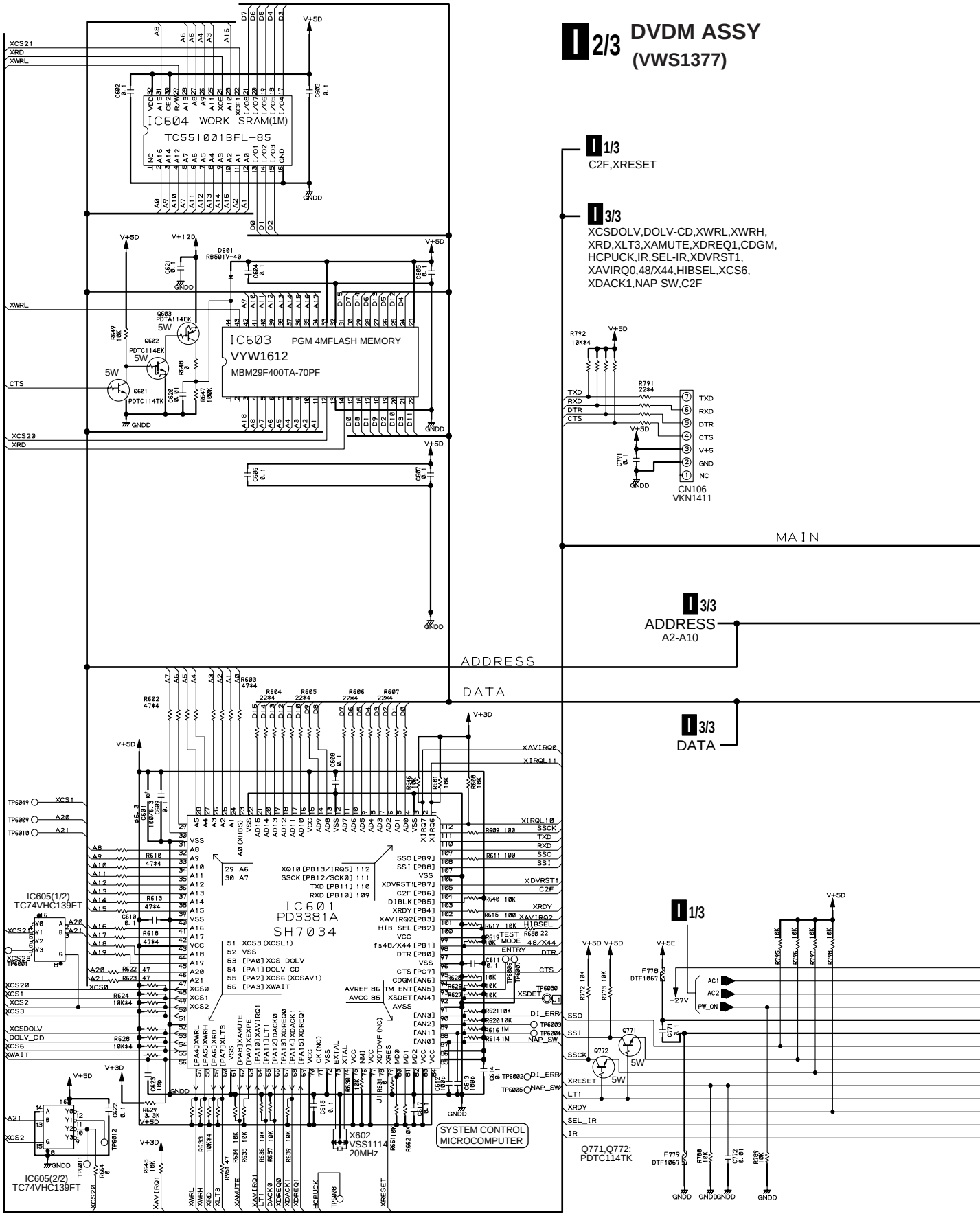


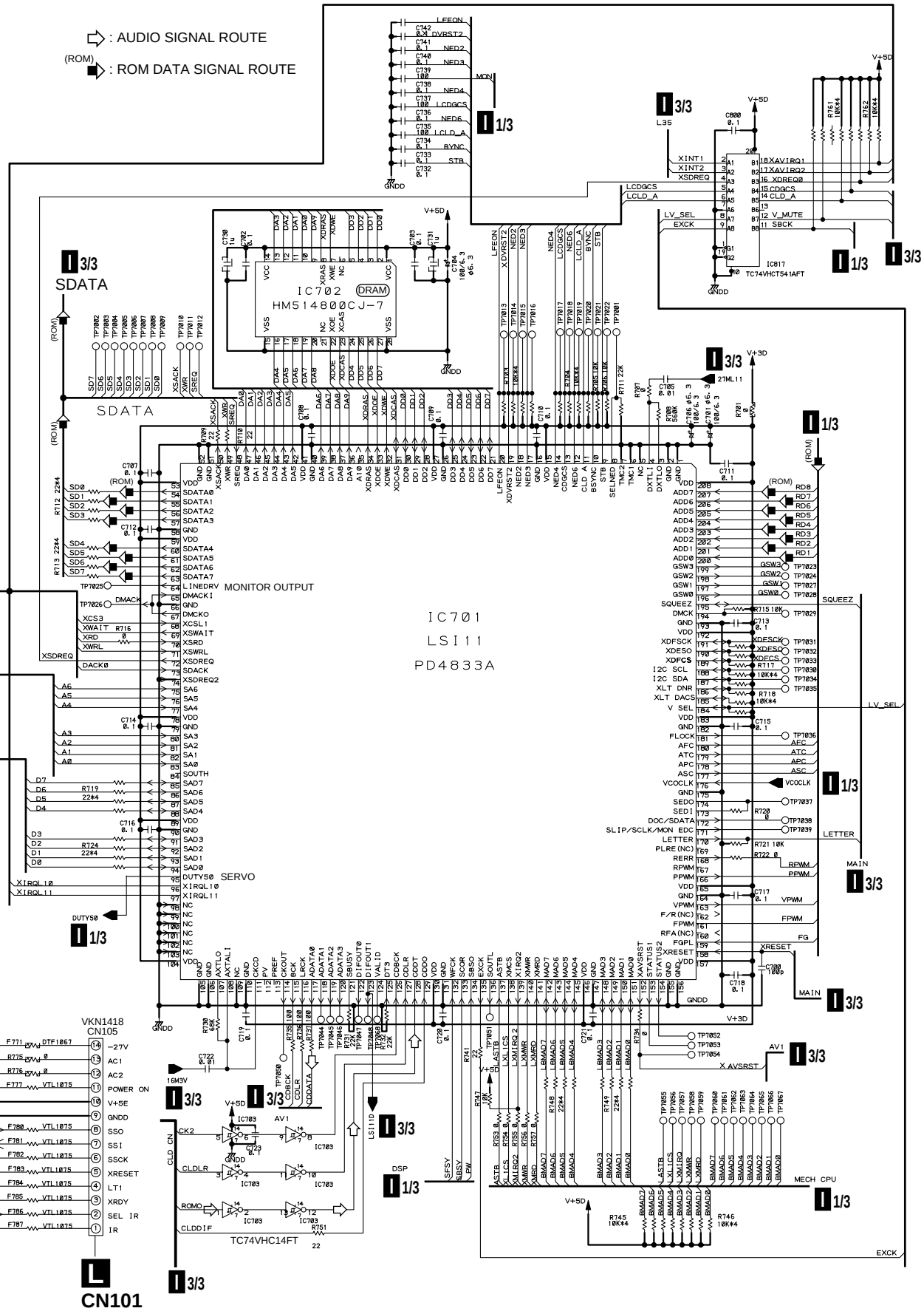
3.2 DVDM ASSY (1/3)



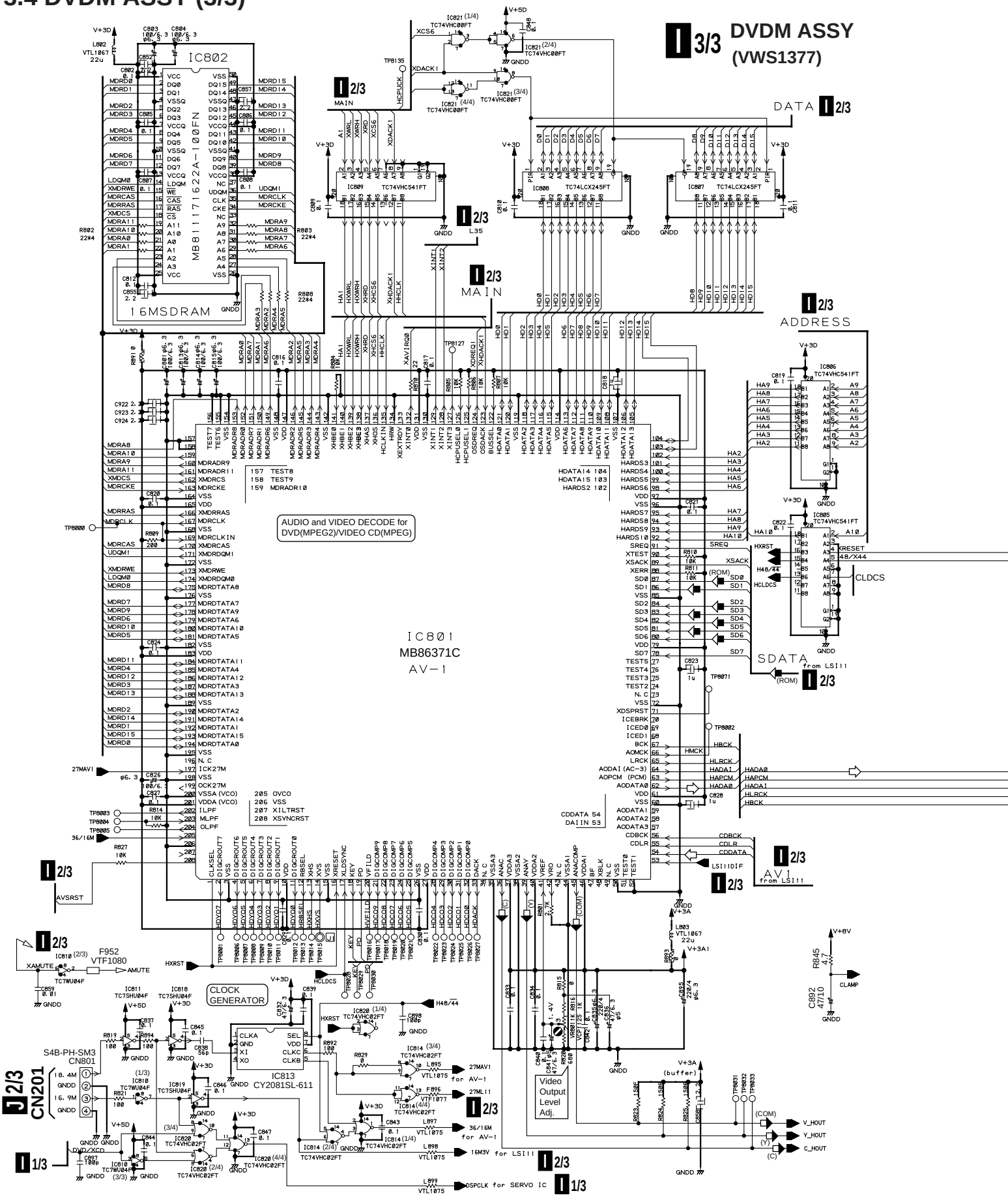

IC501:MECHANISM CONTROL MICROCOMPUTER for DVD
: RF SIGNAL ROUTE
: FOCUS SERVO LOOP LINE
: TRACKING SERVO LOOP LINE
: SLIDER SERVO LOOP LINE
IC506 TC74VHCT245AFT
IC501 PD4889A
IC503 TC74HC573AF
IC502 SRM2B256SLMX70
256K SRAM
IC504 TC74VHC20FT
IC505(1/2) TC74VHC139FT
IC505(2/2) TC74VHC139FT
IC201 LC78650NE
IC201:Digital Signal Processor (Servo Control for DVD)
VKF1001 TP200
3/3
2/3
1/3
FSX,EFLG,SLDPOS, DVDPRK,SHAKE, SCKI,SSI1,SSO1,CLD
XRESET,SBSY,PW, SFSY,SBCK,MON, C2F,FG
CLDFG
SPDL
DUTY50
V165

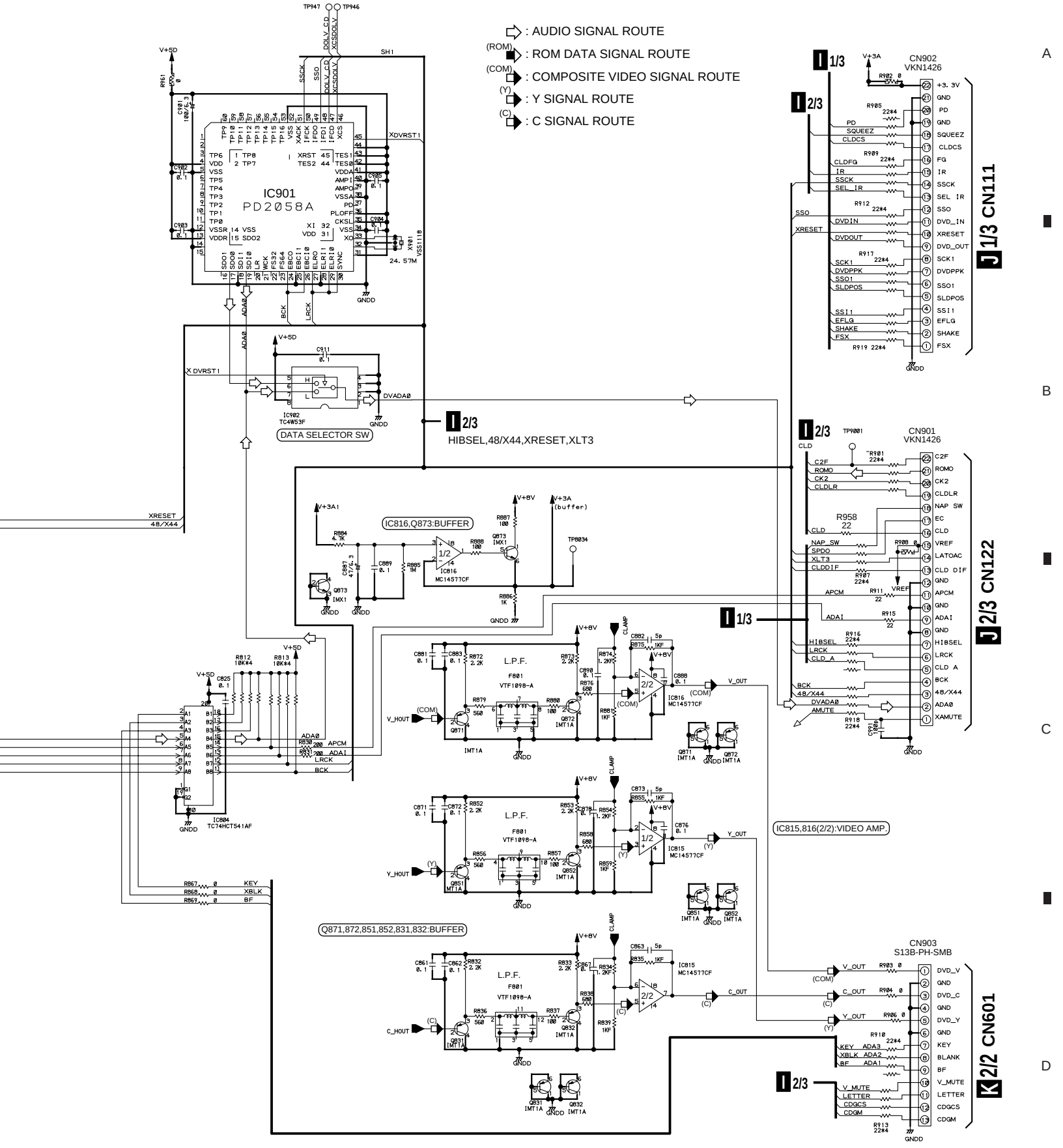
3.3 DVDM ASSY (2/3)




: AUDIO SIGNAL ROUTE
(ROM) : ROM DATA SIGNAL ROUTE
IC702 DRAM HM514800CJ-7
IC701 LSI11 PD4833A
MONITOR OUTPUT
SERVO
SDATA
IC817 TC74VHCT541AFT
VKN1418 CN105
CN101
TC74VHC14FT
DSP
MECH CPU
SQUEEZ
LETTER
MAIN
LV_SEL
EXCK
XRESET
V+5D
V+3D
GNDD

3.4 DVDM ASSY (3/3)



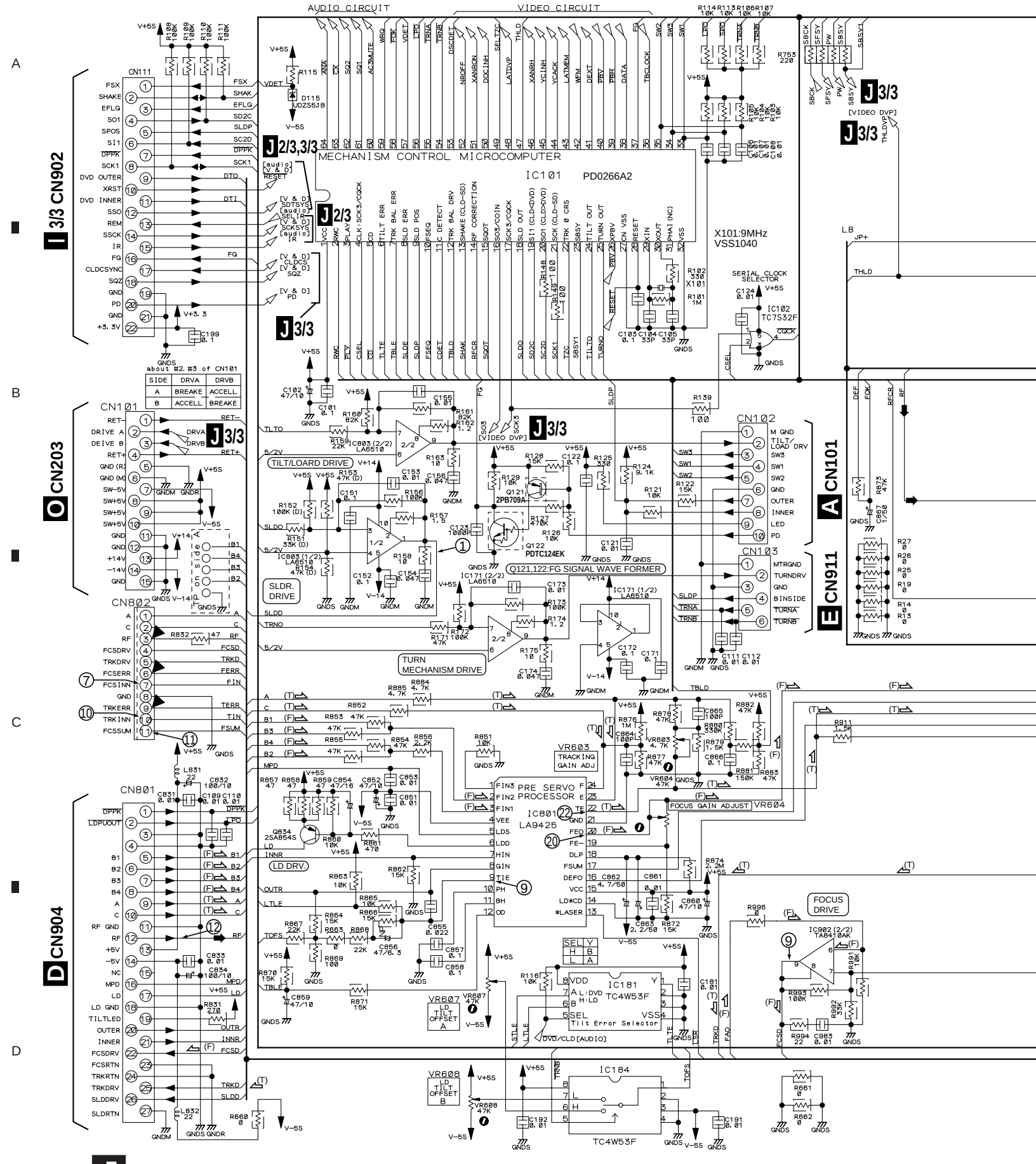

: AUDIO SIGNAL ROUTE
(ROM) : ROM DATA SIGNAL ROUTE
(COM) : COMPOSITE VIDEO SIGNAL ROUTE
(Y) : Y SIGNAL ROUTE
(C) : C SIGNAL ROUTE
IC901
PD2058A
24. 57M
DATA SELECTOR SW
IC902
TC4W53F
HIBSEL,48/X44,XRESET,XLT3
IC816,Q873:BUFFER
IC804
TC74HCT541AF
L.P.F.
F801
VTF1098-A
IC816
MC14577CF
IC815
MC14577CF
IC815,816(2/2):VIDEO AMP.
Q871,872,851,852,831,832:BUFFER
CN902
VKN1426
CN901
VKN1426
CN903
S13B-PH-SMB
J 1/3 CN111
J 2/3 CN122
K 2/2 CN601

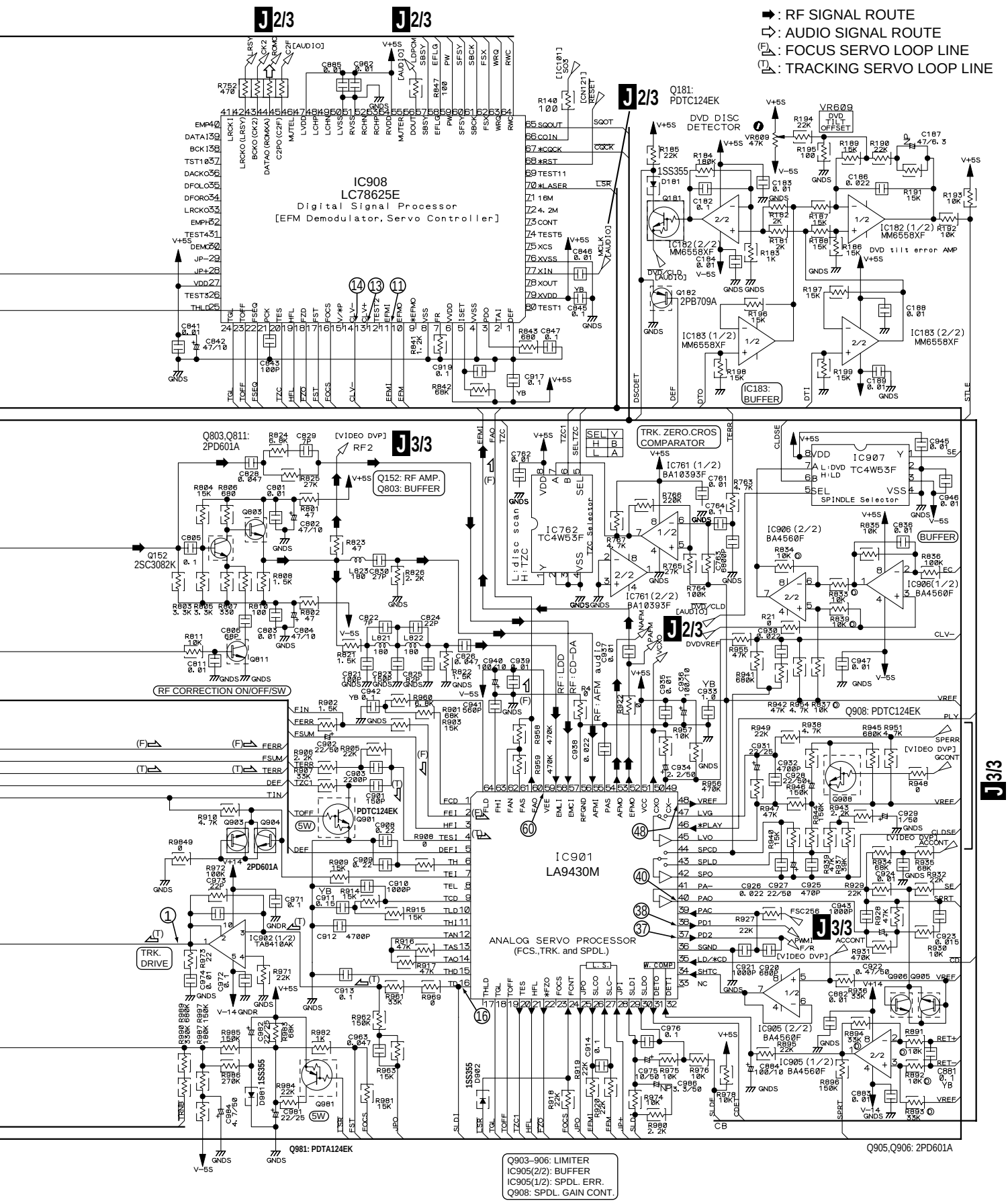
3.5 CLDM ASSY (1/3)

J 2/3 AUDIO CIRCUIT

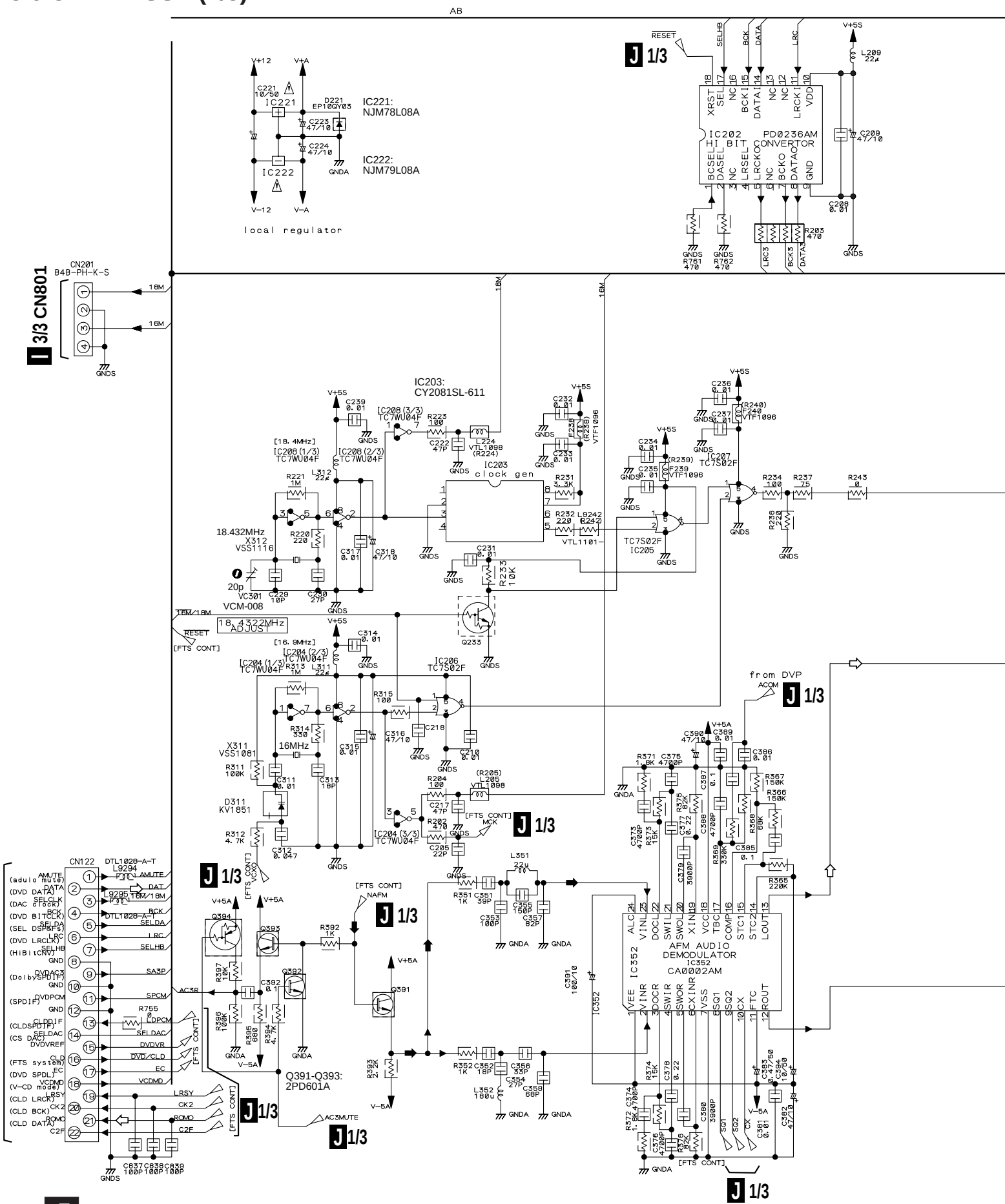
J 3/3 VIDEO CIRCUIT

J 1/3 CLDM ASSY (VWS1358)



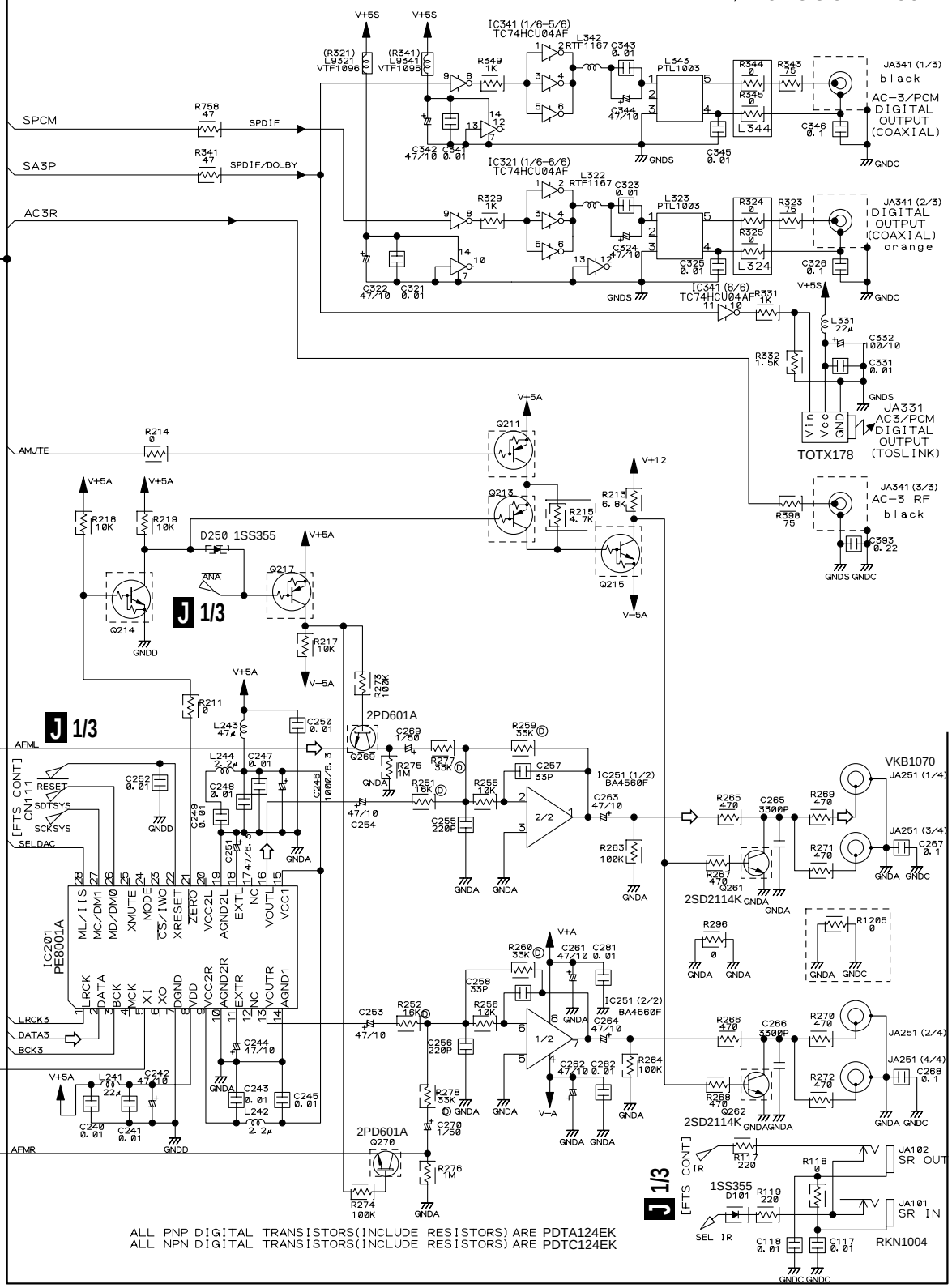

➡: RF SIGNAL ROUTE
⇨: AUDIO SIGNAL ROUTE
(F): FOCUS SERVO LOOP LINE
(T): TRACKING SERVO LOOP LINE
J 2/3
J 3/3
J 1/3
IC908
LC78625E
Digital Signal Processor
[EFM Demodulator, Servo Controller]
IC901
LA9430M
ANALOG SERVO PROCESSOR
(FCS.,TRK. and SPDL.)
IC762
TC4W53F
IC907
TC4W53F
SPINDLE Selector
IC761 (1/2)
BA10393F
IC761(2/2)
BA10393F
IC906 (2/2)
BA4560F
IC906(1/2)
BA4560F
IC905 (2/2)
BA4560F
IC905(1/2) BA4560F
IC182 (1/2)
MM6558XF
IC182(2/2)
MM6558XF
IC183 (1/2)
MM6558XF
IC183(2/2)
MM6558XF
IC183:
BUFFER
Q181:
PDTC124EK
Q182
2PB709A
Q803,Q811:
2PD601A
Q152
2SC3082K
Q152: RF AMP.
Q803: BUFFER
Q901
PDTC124EK
Q902
2PD601A
Q908: PDTC124EK
Q981: PDTA124EK
Q905,Q906: 2PD601A
DVD DISC
DETECTOR
DVD TILT
OFFSET
DVD tilt error AMP
TRK. ZERO.CROS
COMPARATOR
RF CORRECTION ON/OFF/SW
TRK.
DRIVE
Q903–906: LIMITER
IC905(2/2): BUFFER
IC905(1/2): SPDL. ERR.
Q908: SPDL. GAIN CONT.

3.6 CLDM ASSY (2/3)

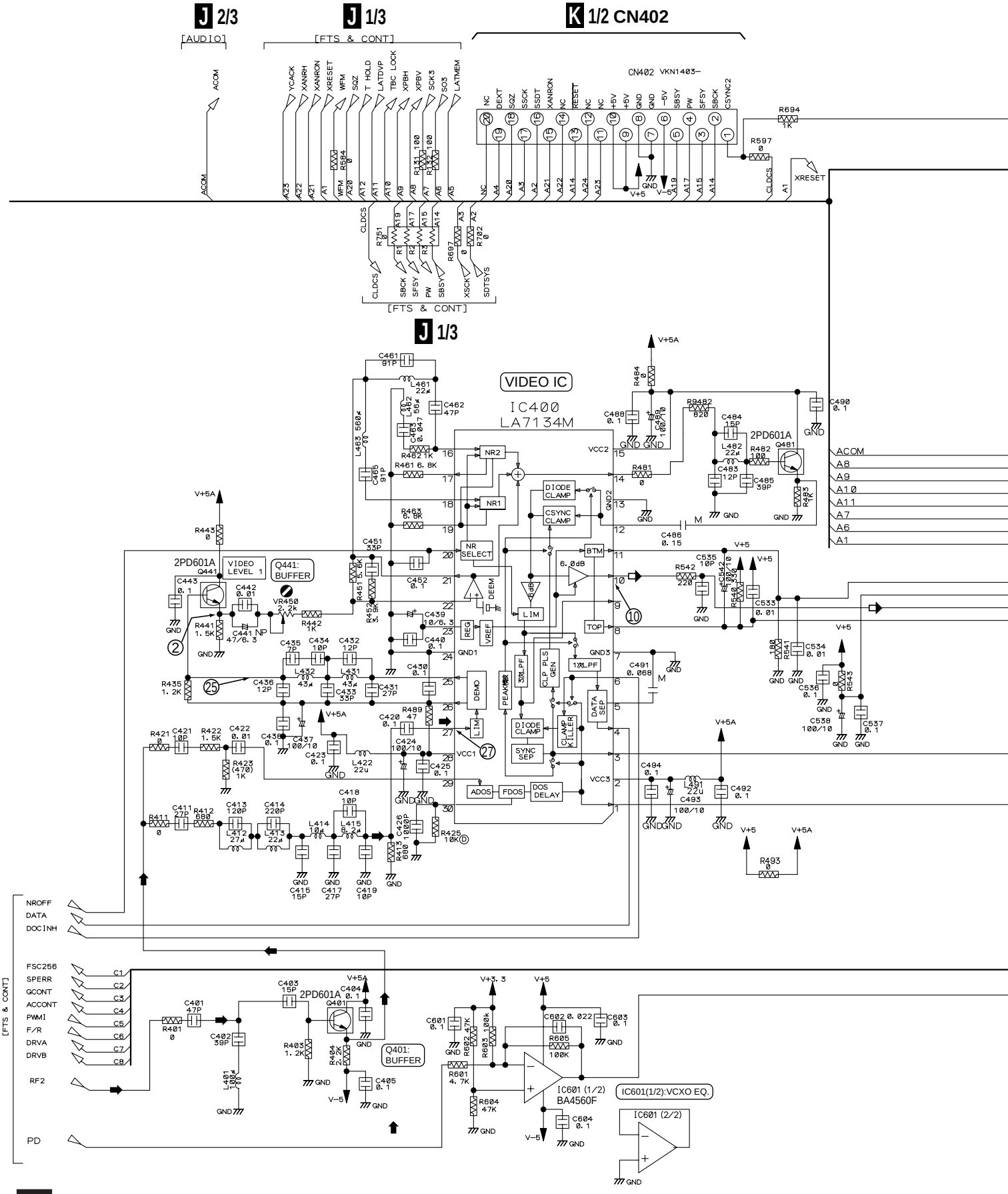


J 2/3 CLDM ASSY (VWS1358)

➡: RF SIGNAL ROUTE
⇨: AUDIO SIGNAL ROUTE



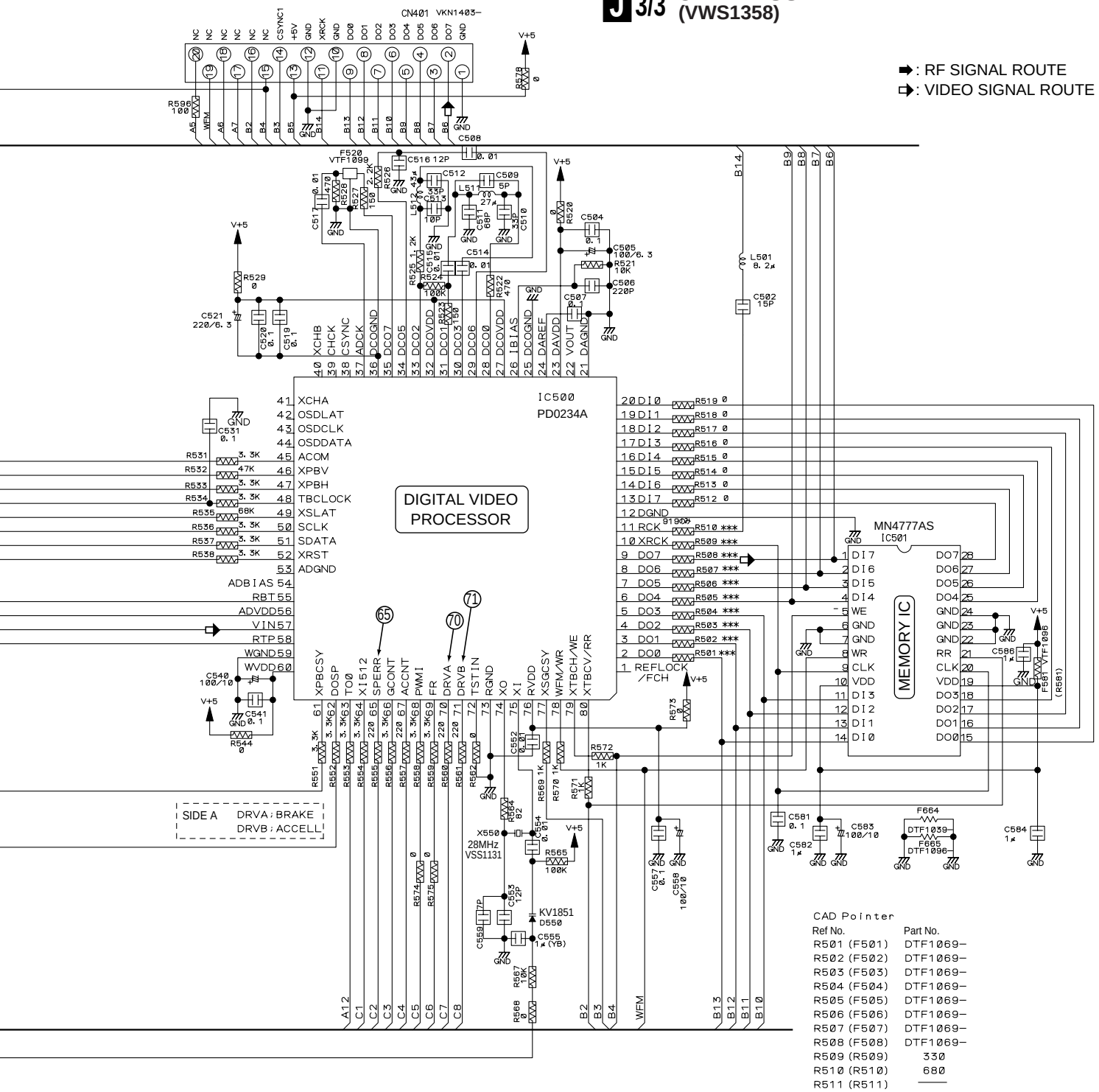
3.7 CLDM ASSY (3/3)



K 1/2 CN401

J 3/3 CLDM ASSY (VWS1358)

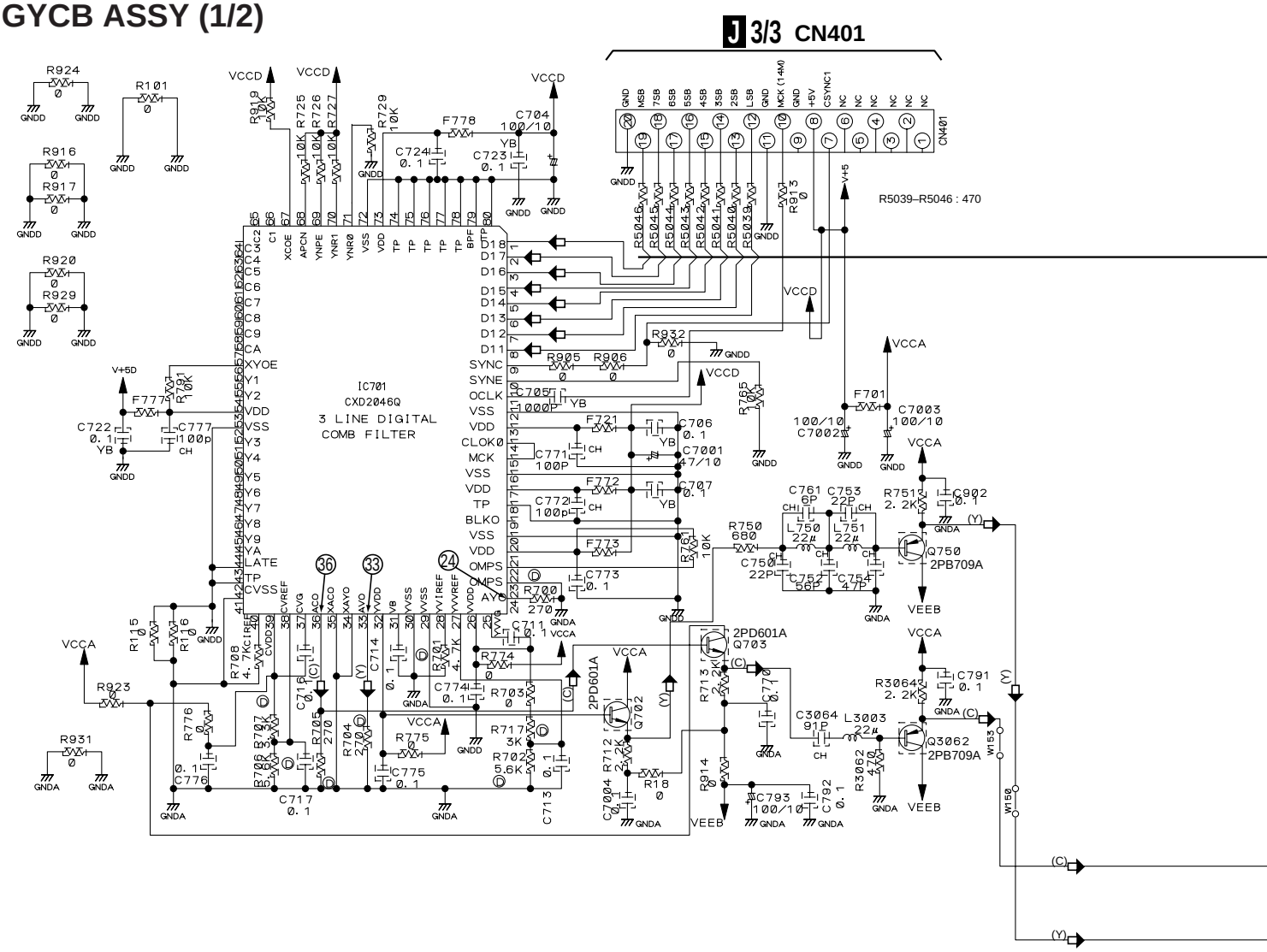
➡: RF SIGNAL ROUTE
➪: VIDEO SIGNAL ROUTE

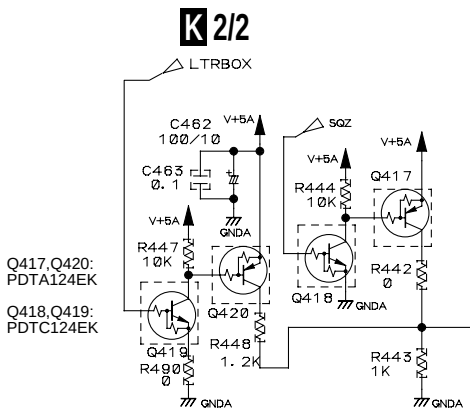


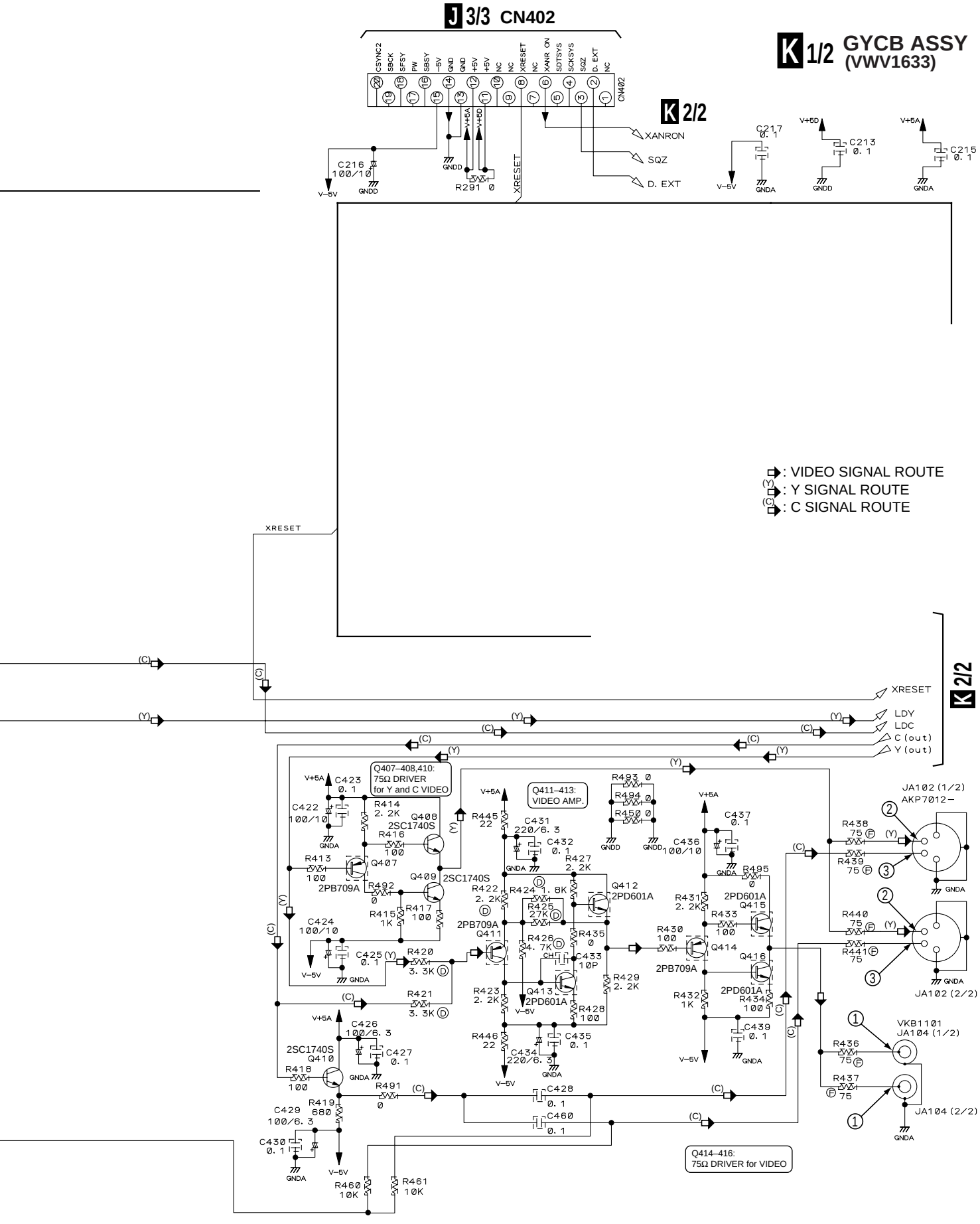
CAD Pointer

Ref No.	Part No.
R501 (F501)	DTF1069-
R502 (F502)	DTF1069-
R503 (F503)	DTF1069-
R504 (F504)	DTF1069-
R505 (F505)	DTF1069-
R506 (F506)	DTF1069-
R507 (F507)	DTF1069-
R508 (F508)	DTF1069-
R509 (R509)	330
R510 (R510)	680
R511 (R511)	

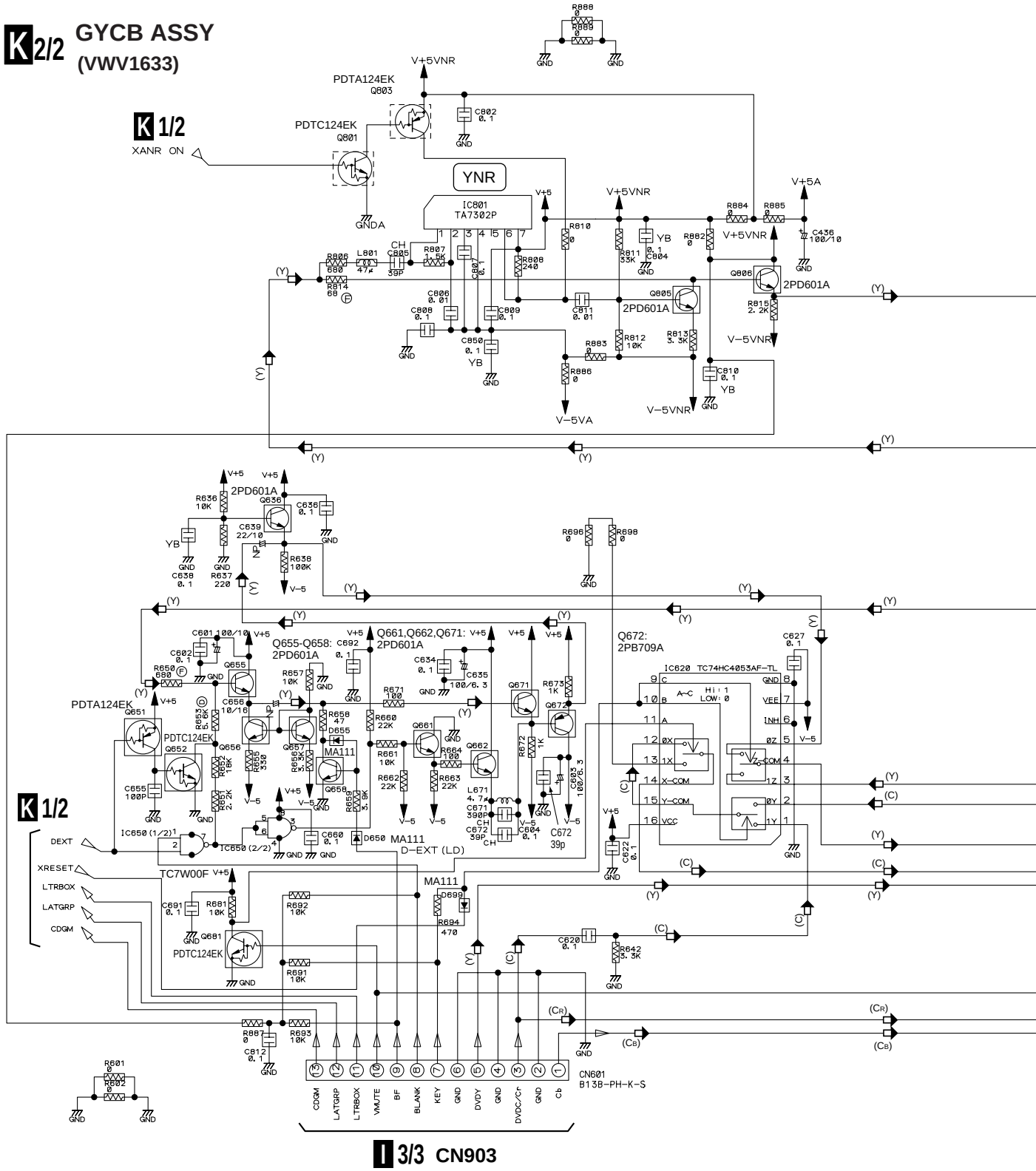
3.8 GYCB ASSY (1/2)



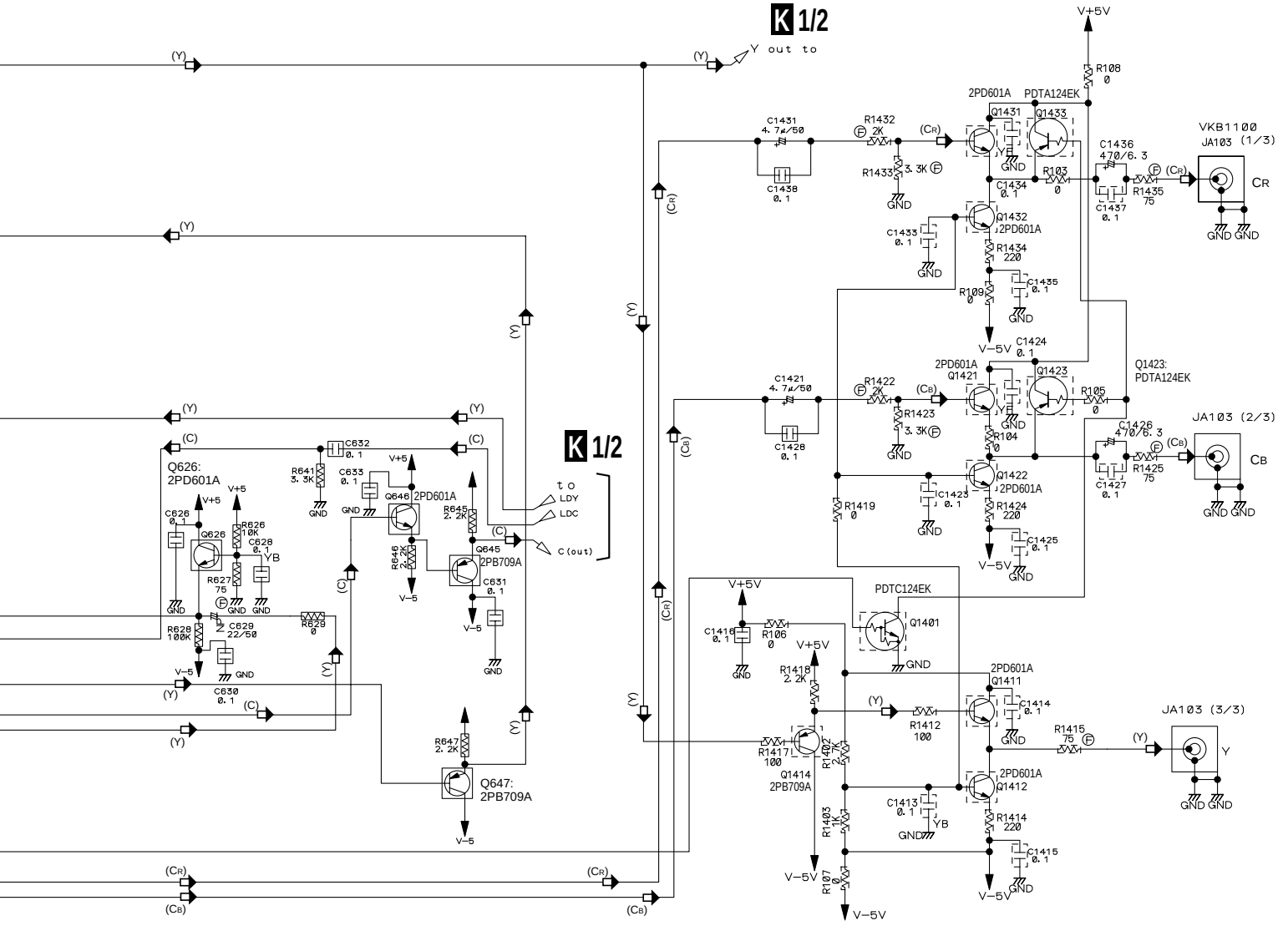



J 3/3 CN402
CSYNC2
SBCK
SFSY
PW
SBSY
–5V
GND
GND
+5V
+5V
NC
NC
XRESET
NC
XANR ON
SDTSYS
SCKSYS
SQZ
D. EXT
NC
CN402
K 1/2 GYCB ASSY (VWV1633)
K 2/2
XANRON
SQZ
D. EXT
C216 100/10
R291 0
C217 0.1
C213 0.1
C215 0.1
V+5D
V+5A
V–5V
GNDD
GNDA
XRESET
: VIDEO SIGNAL ROUTE
: Y SIGNAL ROUTE
: C SIGNAL ROUTE
XRESET
LDY
LDC
C (out)
Y (out)
K 2/2
Q407–408,410: 75Ω DRIVER for Y and C VIDEO
Q411–413: VIDEO AMP.
Q414–416: 75Ω DRIVER for VIDEO
JA102 (1/2) AKP7012–
JA102 (2/2)
VKB1101 JA104 (1/2)
JA104 (2/2)
2SC1740S
2PB709A
2PD601A

3.9 GYCB ASSY (2/2)

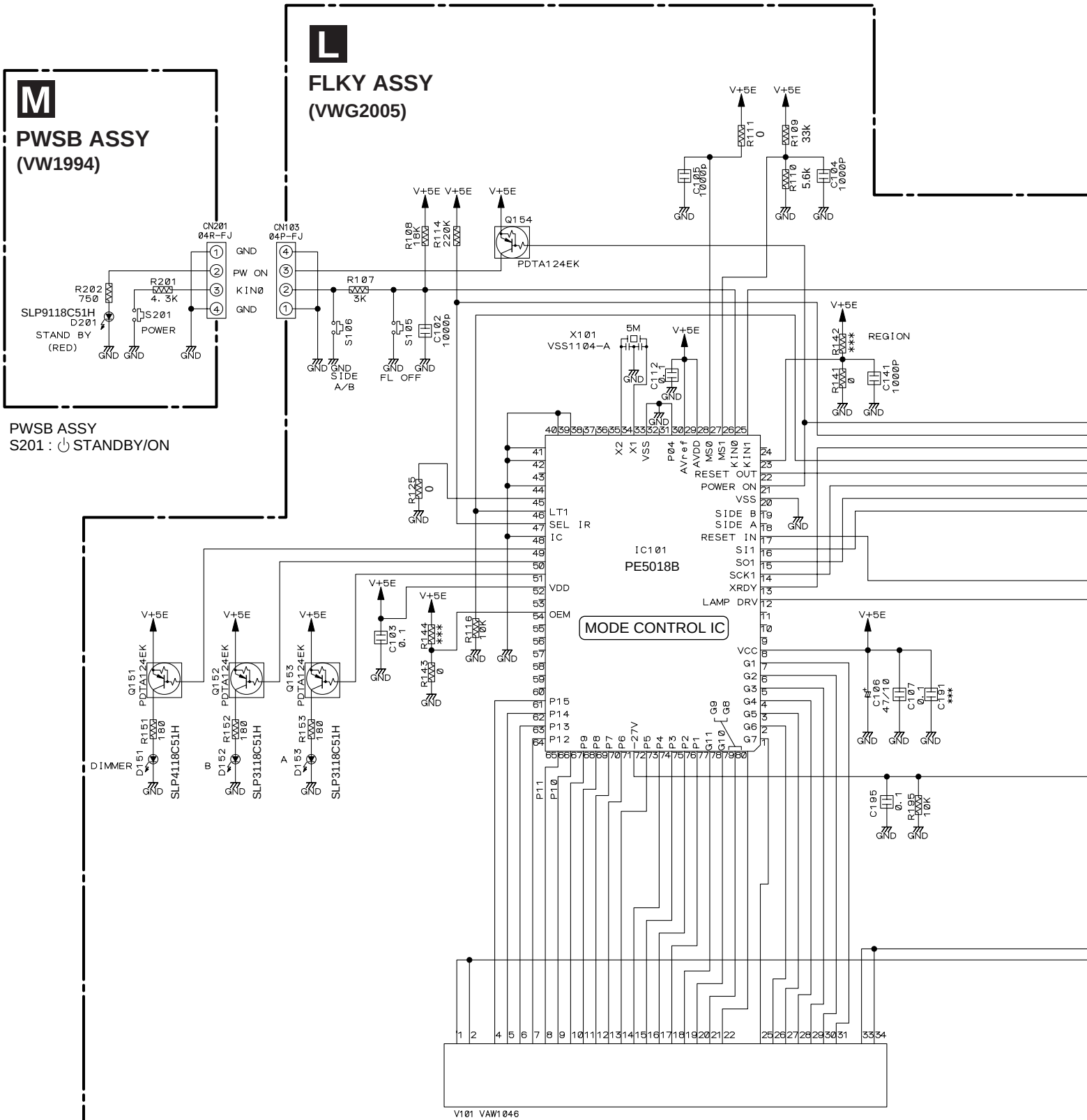


(CB): COMPONENT VIDEO SIGNAL ROUTE (CB)
(CR): COMPONENT VIDEO SIGNAL ROUTE (CR)
(Y): Y SIGNAL ROUTE
(C): C SIGNAL ROUTE



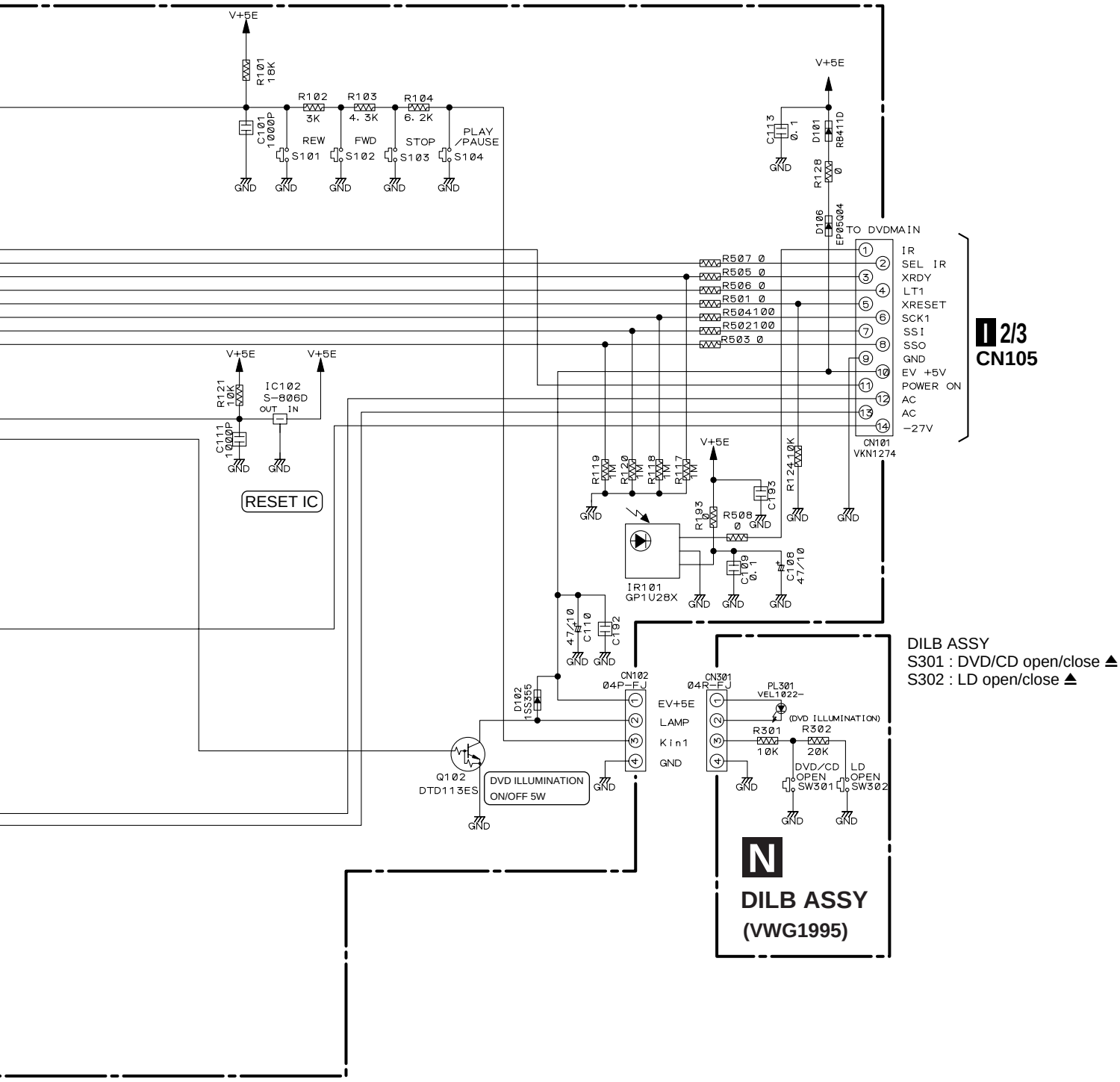
Q1411, Q1412, Q1421, Q1422, Q1431, Q1432
: 75Ω DRIVER for COMPONENT VIDEO OUT (Y, CB, CR)

3.10 FLKY, PWSB and DILB ASSEMBLIES



PWSB ASSY
S201 : ⏻ STANDBY/ON

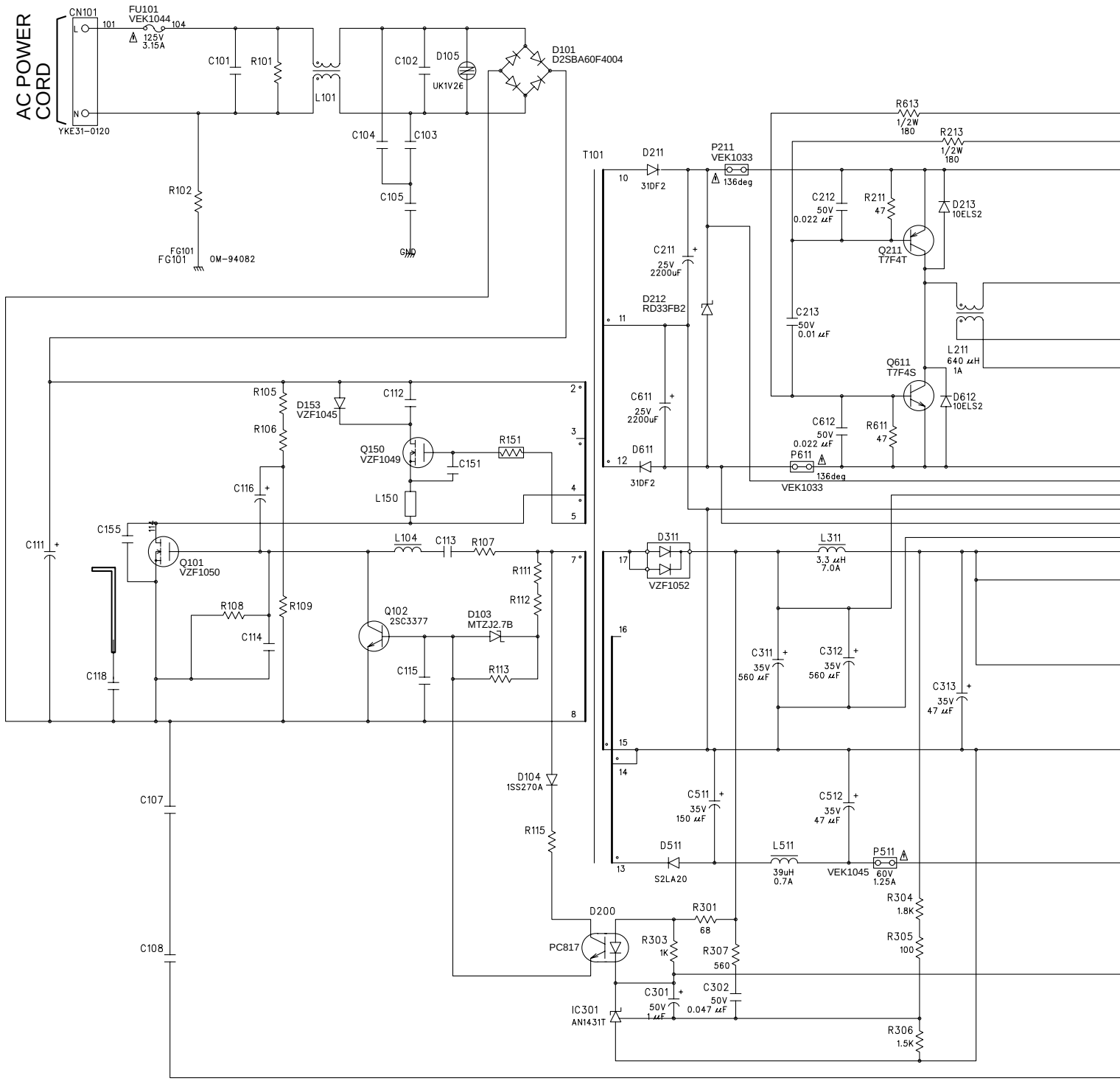
FLKY ASSY
S101 : Reverse I◄◄ ◄◄
S102 : Foward ►► ►►I
S103 : Stop ■
S104 : Play/Pause ►/II
S105 : Dimmer (FL DIMMER)
S106 : Disc Side A/B



3.11 POWER SUPPLY ASSY

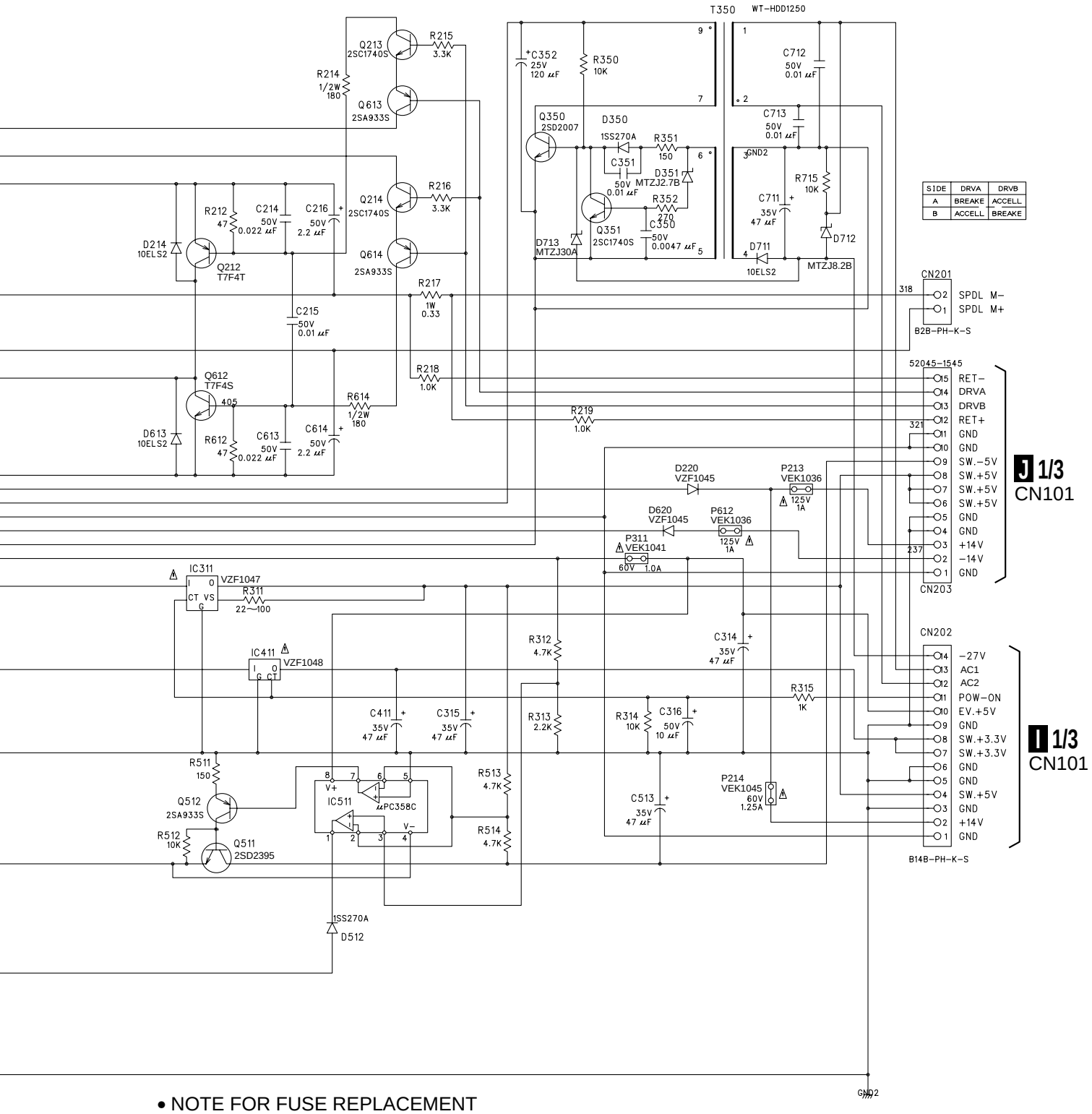
- **FOR KU/CA TYPE**

POWER SUPPLY ASSY (VWR1286)



《NOTE OF SPARE PARTS IN POWER SUPPLY (SYPS) ASSY》

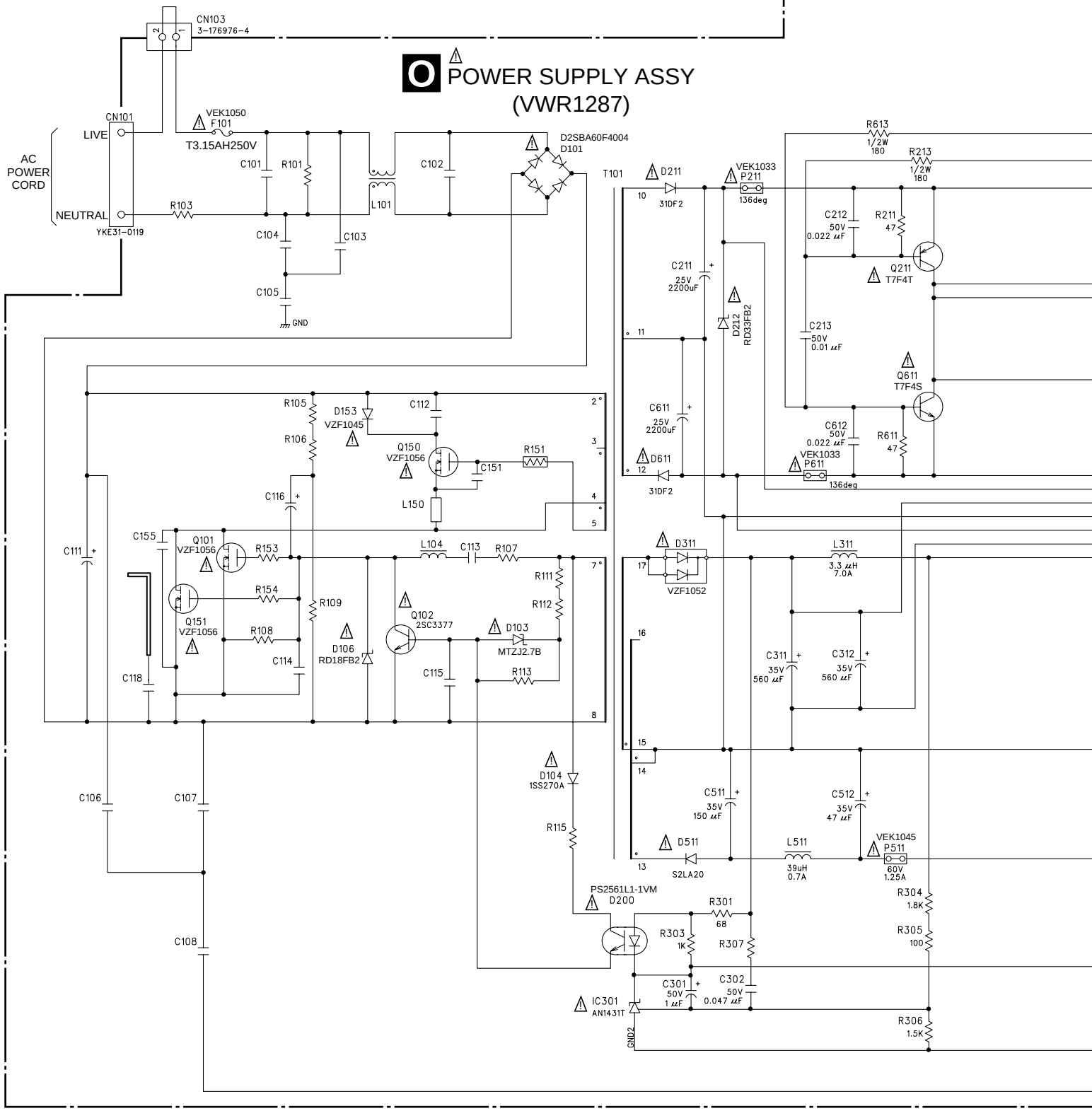
- In case of repairing, use the described parts only to prevent an accident.
- Please write the red √ mark on the board when the primary section of POWER SUPPLY (SYPS) Assy is repaired.
- Please take care to keep the space, not touching other parts when replacing the parts.



• NOTE FOR FUSE REPLACEMENT

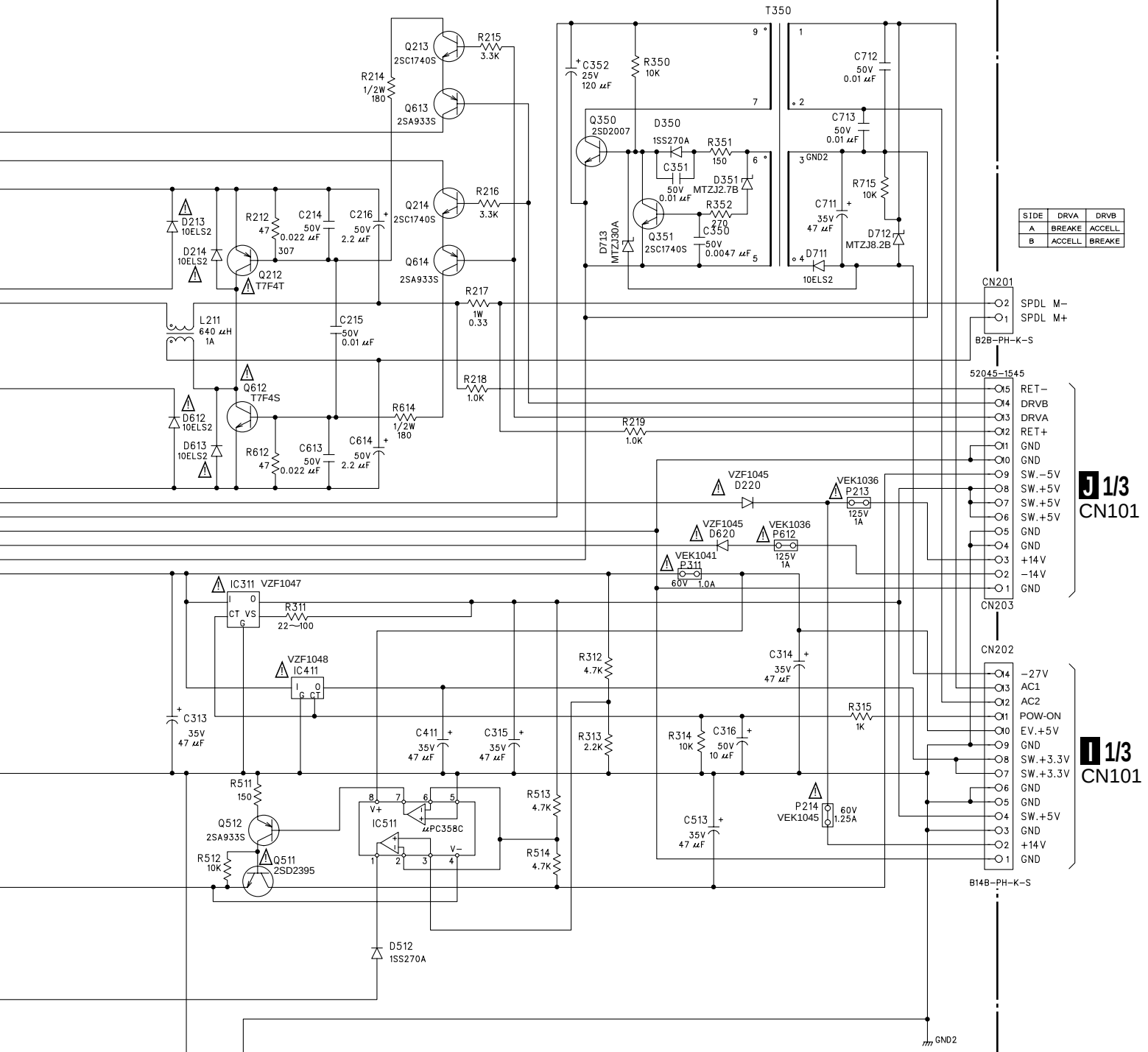
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

• FOR RD/RA TYPE



《NOTE ON SPARE PARTS IN POWER SUPPLY ASSY》

- In case of repairing, use the described parts only to prevent an accident.
- Write the red ✓ mark on the board when the primary section of POWER SUPPLY Assy is repaired.
- Take care to keep the space, not touching other parts when replacing the parts.



• NOTE FOR FUSE REPLACEMENT

CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

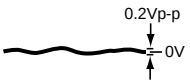
● WAVEFORMS AND VOLTAGES

Note : (No) in the table correspond to the pin number.
Measurement condition : In case when (D.audio) is written, at time when disc that has digital audio recording is played.

CLDM ASSY

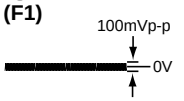
IC801 (LA9425)

(9) 10msec/div



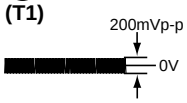
DC mode

(20) 5msec/div
(F1)



DC mode

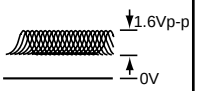
(22) 5msec/div
(T1)



DC mode

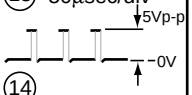
IC908 (LC78625E)

(11) 0.5µsec/div

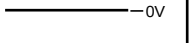


DC mode

(13) 50µsec/div



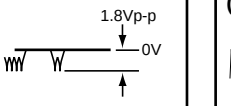
(14)



DC mode

IC803 (LA6510)

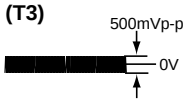
(1) 2msec/div



DC mode

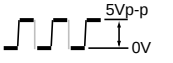
IC901 (LA9430M)

(16) 5msec/div
(T3)



DC mode

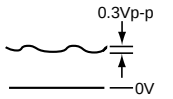
(38) 10µsec/div



(37)

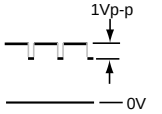
DC mode

(40) 10msec/div



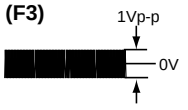
DC mode

(48) 50µsec/div



DC mode

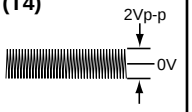
(60) 5msec/div
(F3)



DC mode

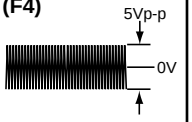
IC902 (TA8410AK)

(1) 5msec/div
(T4)



DC mode

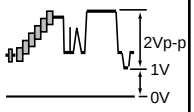
(9) 5msec/div
(F4)



DC mode

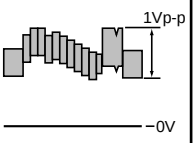
IC400 (LA7134M)

(10) 10µsec/div
(V1)



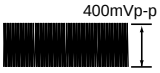
DC mode

(25) 10µsec/div



DC mode

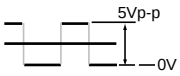
(27) 2msec/div
(RF2)



AC mode

IC500 (PD6159B)

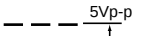
(47) 5msec/div



DC mode

10µsec/div

(57)

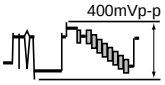


(56)

DC mode

Q441 Emitter

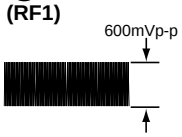
(2) 10µsec/div



AC mode

CN801

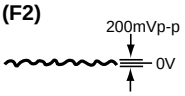
(12) 2msec/div
(RF1)



AC mode

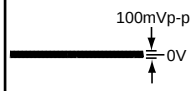
CN802

(7) 5msec/div
(F2)



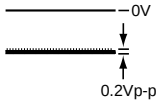
DC mode

(10) 5msec/div



DC mode

(11) 5msec/div

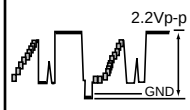


DC mode

GYCB ASSY

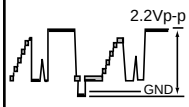
IC301 (CXD2046Q)

(24) 10µsec/div



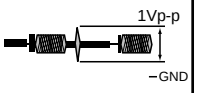
DC mode

(33) 10µsec/div



DC mode

(36) 10µsec/div



DC mode

JA101 (VIDEO OUT)

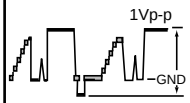
(1) 10µsec/div

(75Ω termination)

DC mode

JA102 YOUT

(3) 10µsec/div

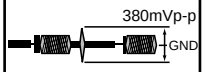


(75Ω termination)

DC mode

JA102 COUT

(4) 10µsec/div



(75Ω termination)

DC mode

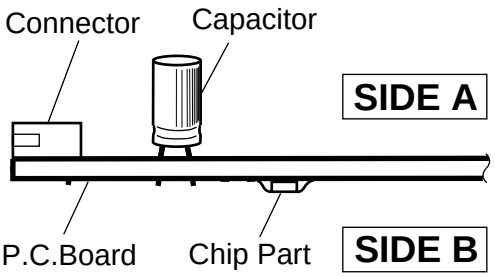
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

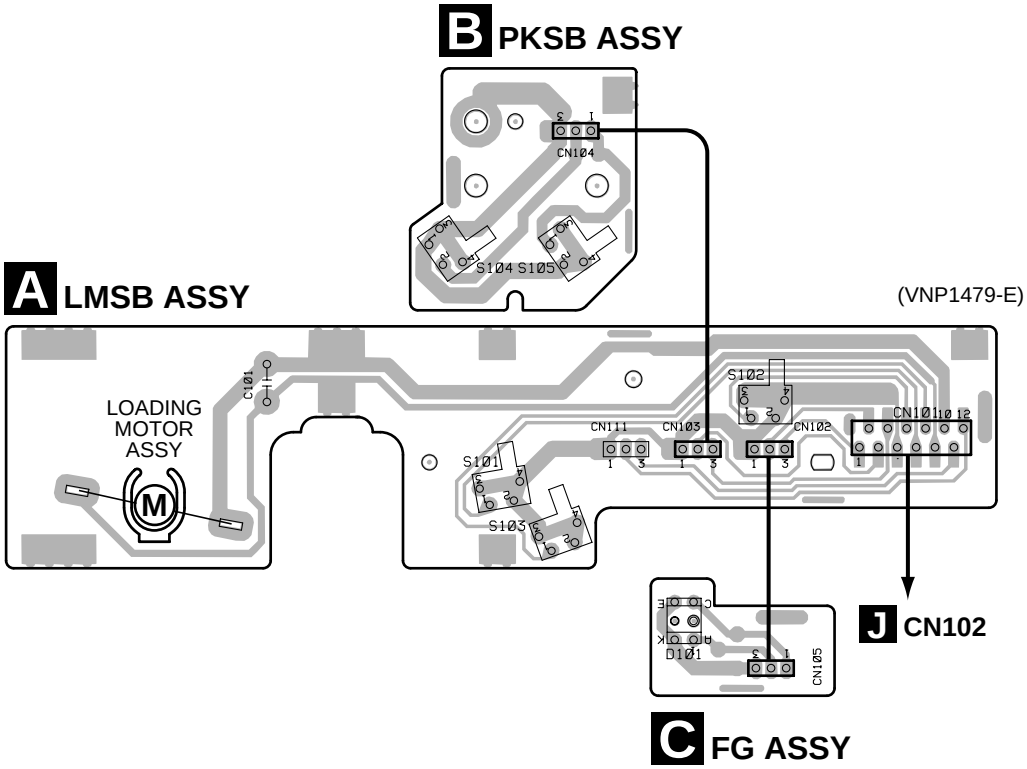
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

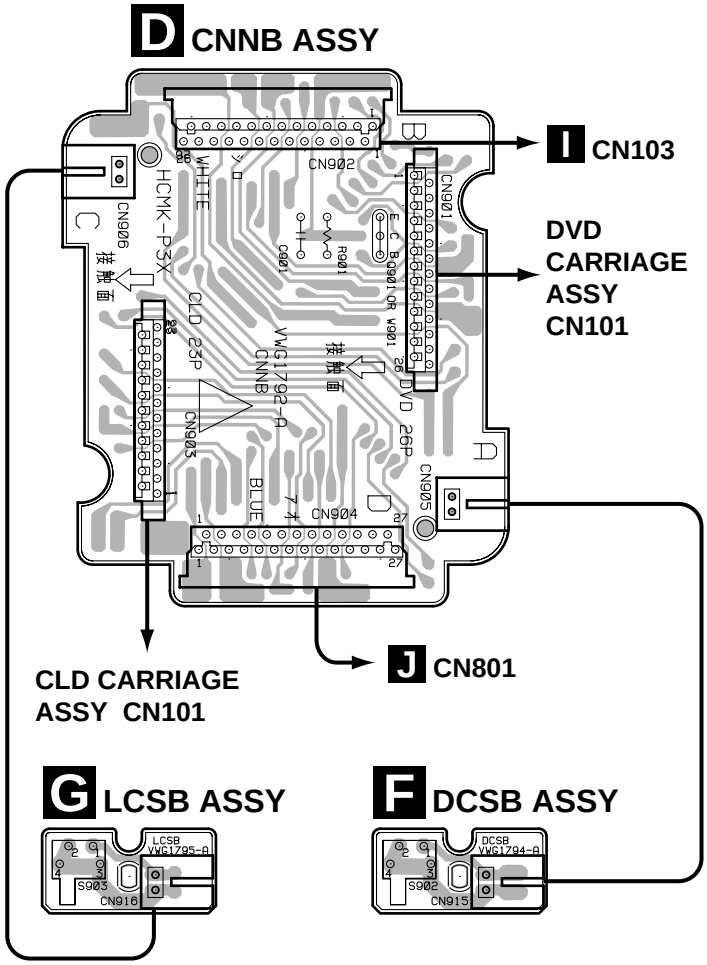
3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

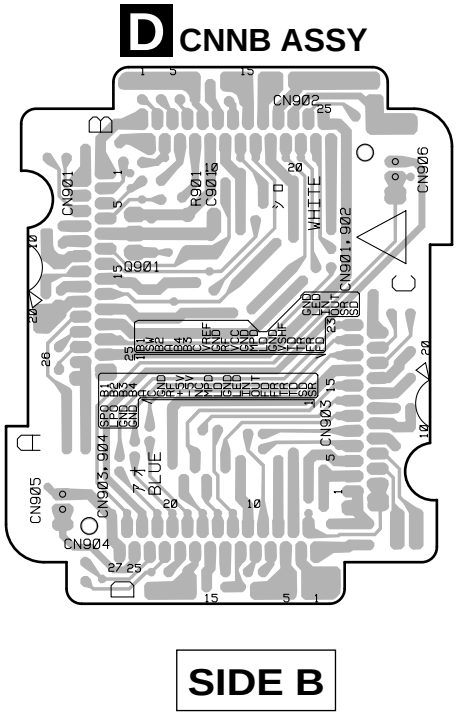


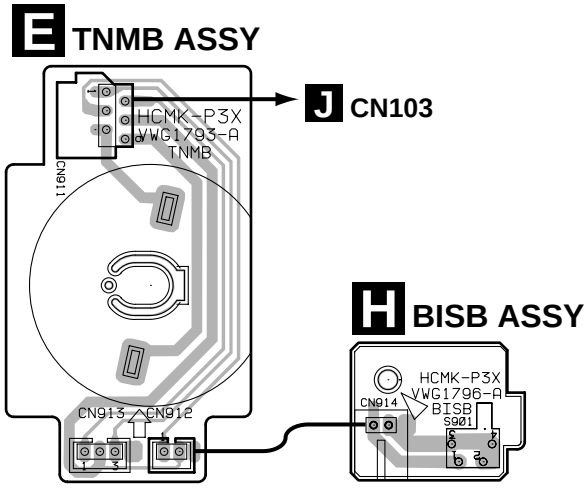
4.1 LMSB, PKSB and FG ASSEMBLIES



4.2 CNNB, TNMB, DCSB, LCSB and BISB ASSEMBLIES





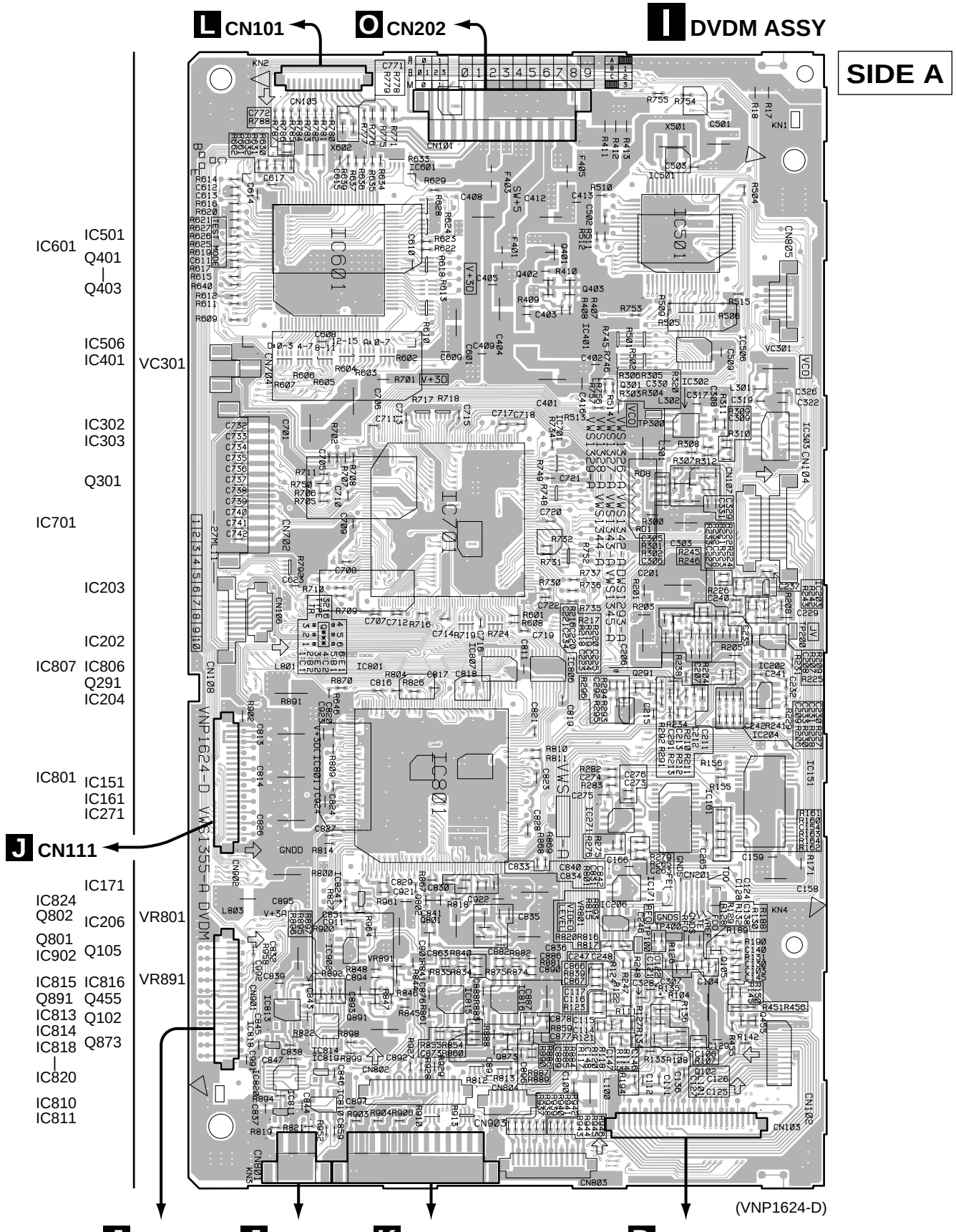


(VNP1599-B)

SIDE A

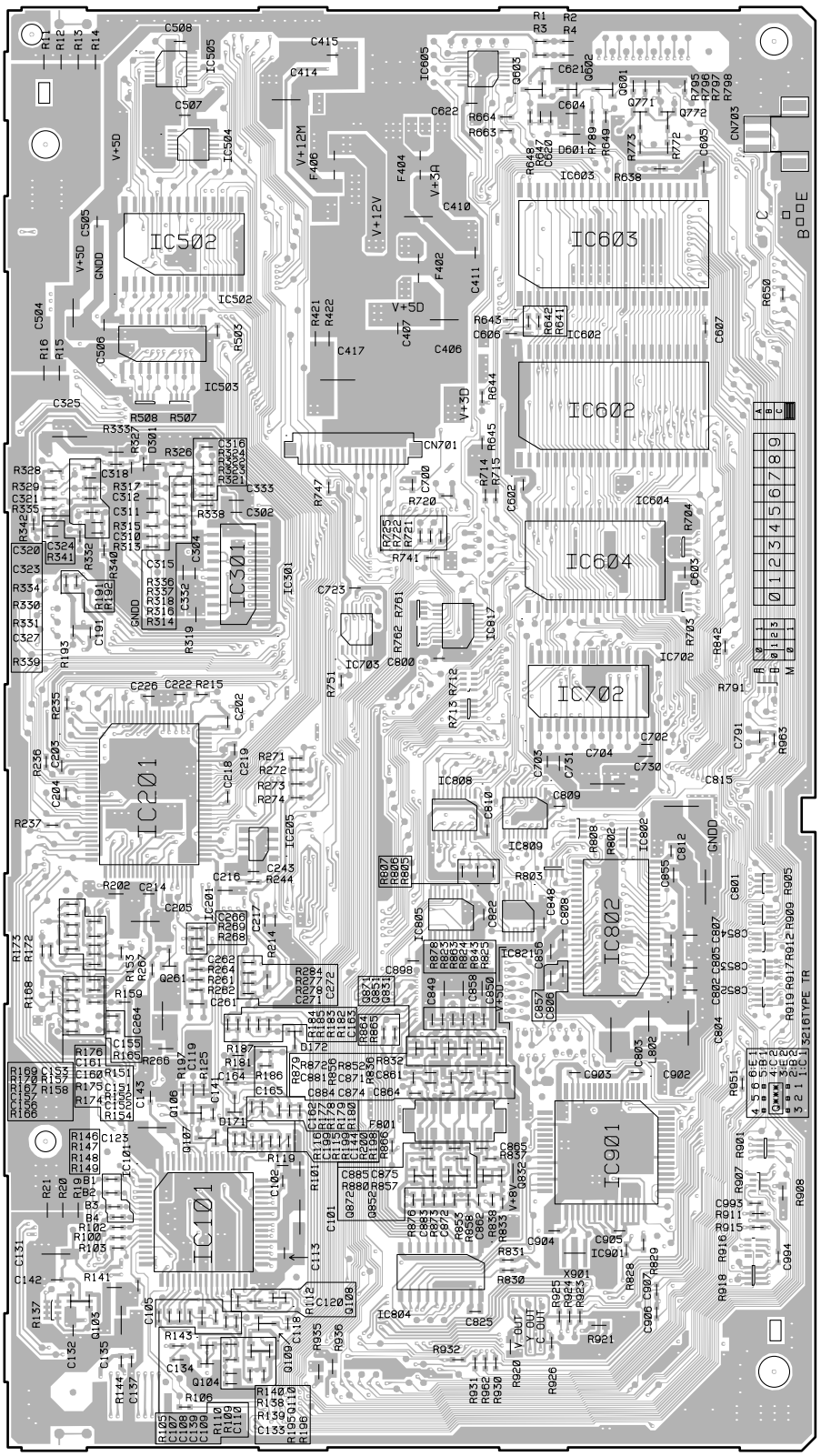
4.3 DVDM ASSY

• This PCB is a four-layered board. Middle layer is mainly connected to Vcc and GND.



DVDM ASSY

SIDE B

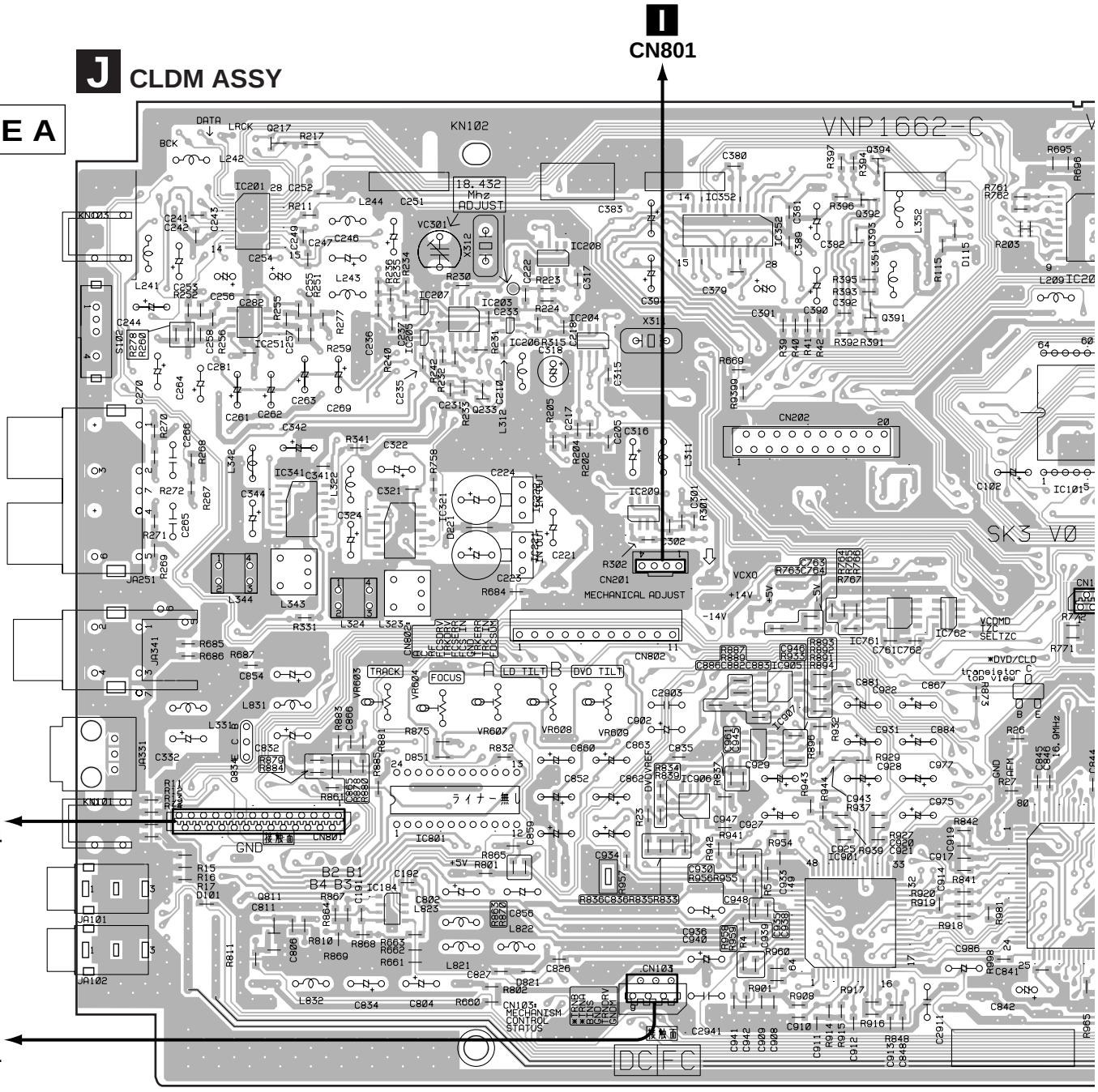


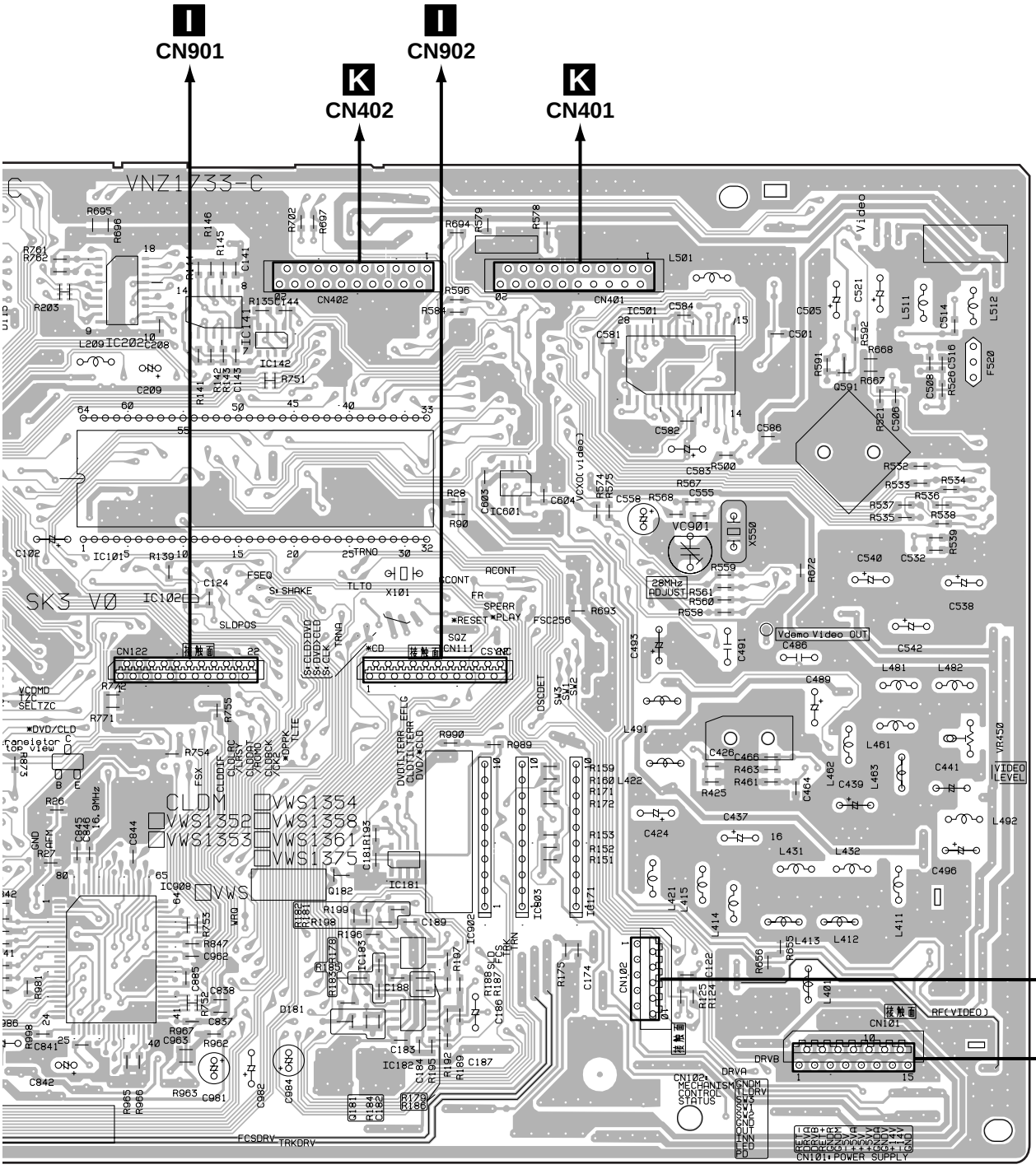
(VNP1624-D)

4.4 CLDM ASSY

J CLDM ASSY

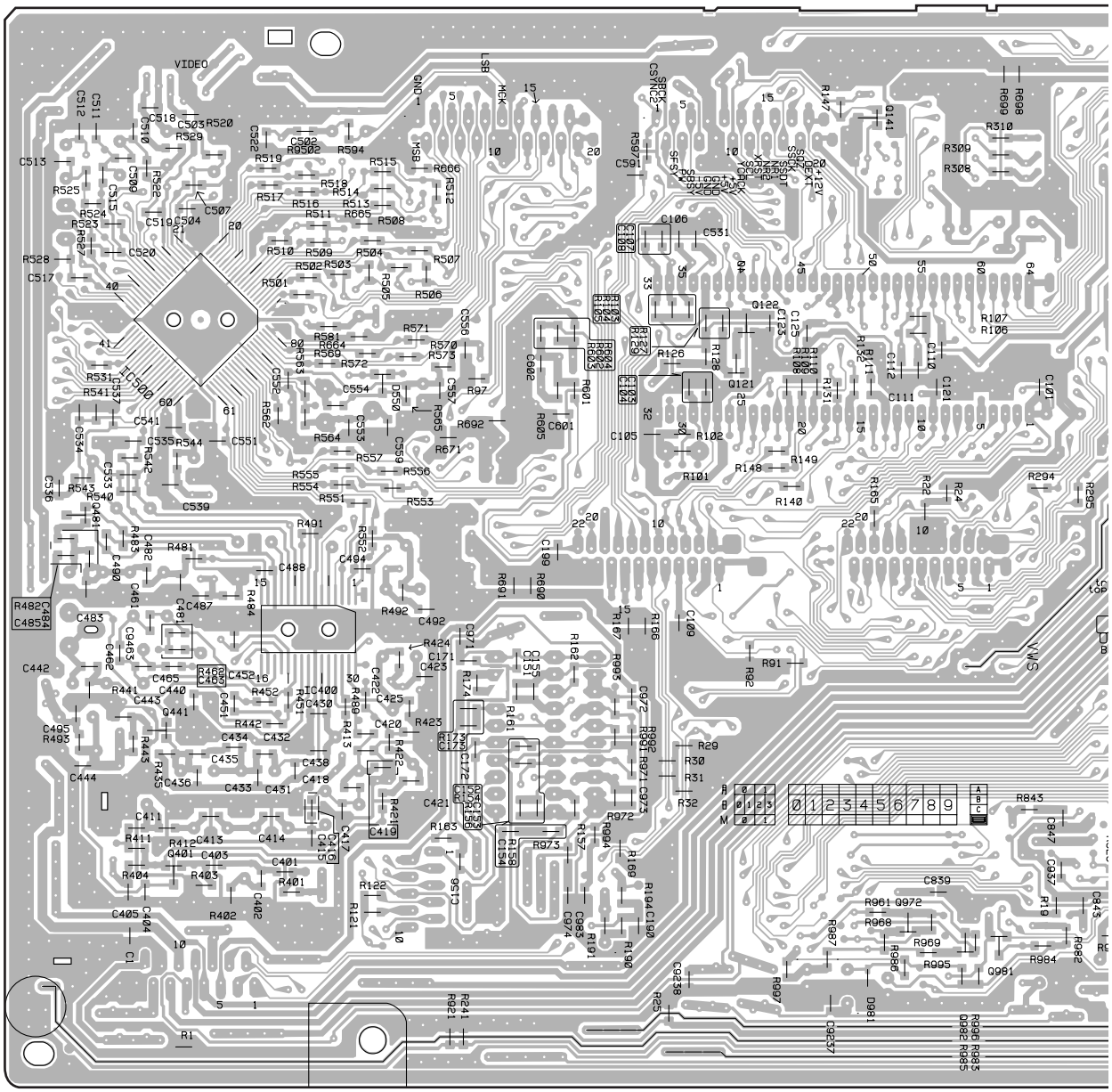
SIDE A




I
CN901
I
CN902
K
CN402
K
CN401
SIDE A
A
CN101
O
CN203
(VNP1662-C)
VNZ1733-C
SK3 VØ
CN122
CN111
CN402
CN401
CN101
CN203
CN1101
CN1102
CN1103
VC901
VR450
IC202
IC908
IC141
IC102
IC142
IC101
Q182
Q181
IC181
IC183
IC182
IC902
IC601
IC803
IC171
IC501
Q591
Vdemo Video OUT
RF(VIDEO)
POWER SUPPLY
MECHANISM CONTROL STATUS

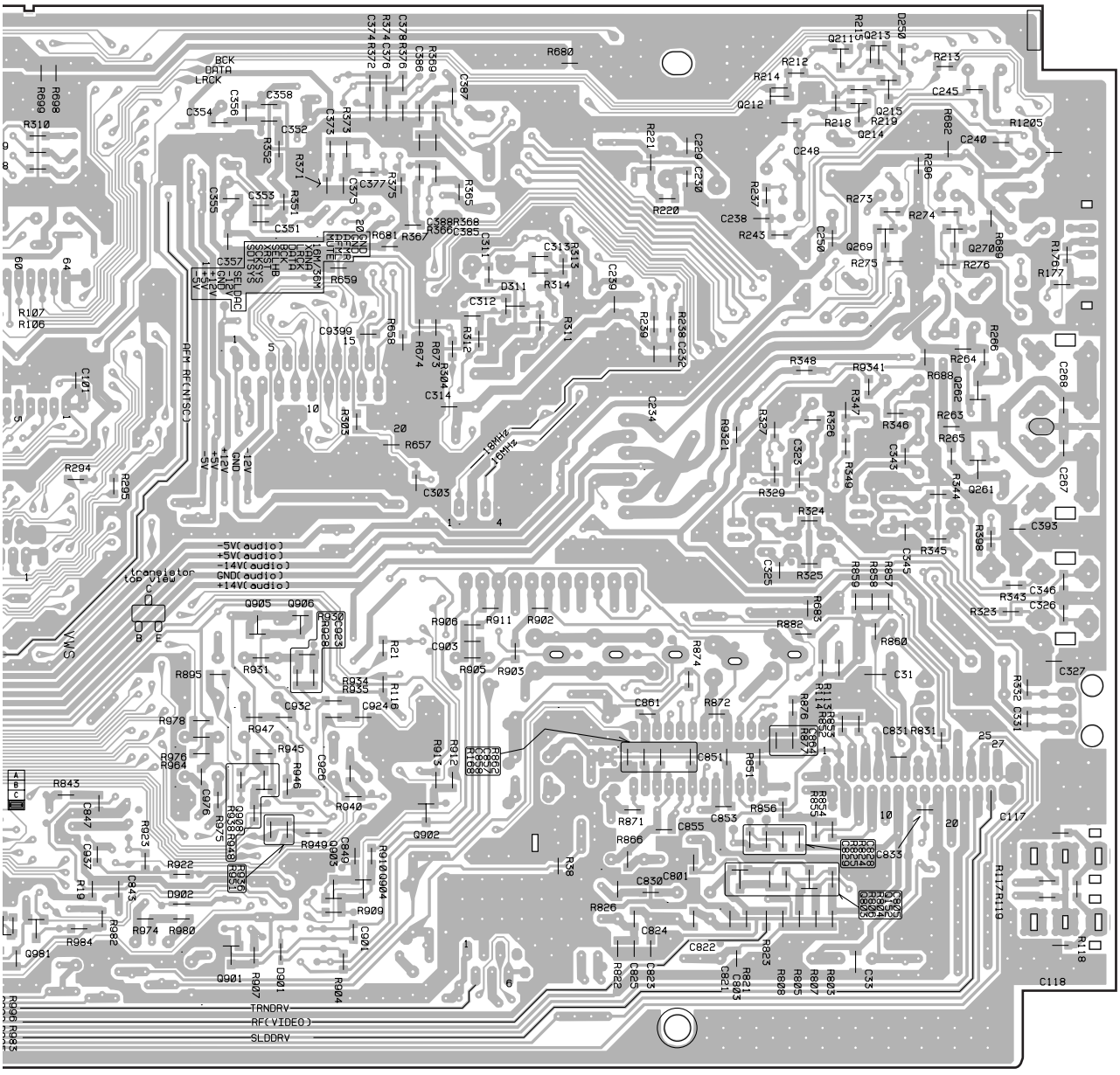
J CLDM ASSY

SIDE B



Q481 Q441 Q401 IC500 IC400 Q122 Q121 Q141 Q972 Q995 Q981

SIDE B



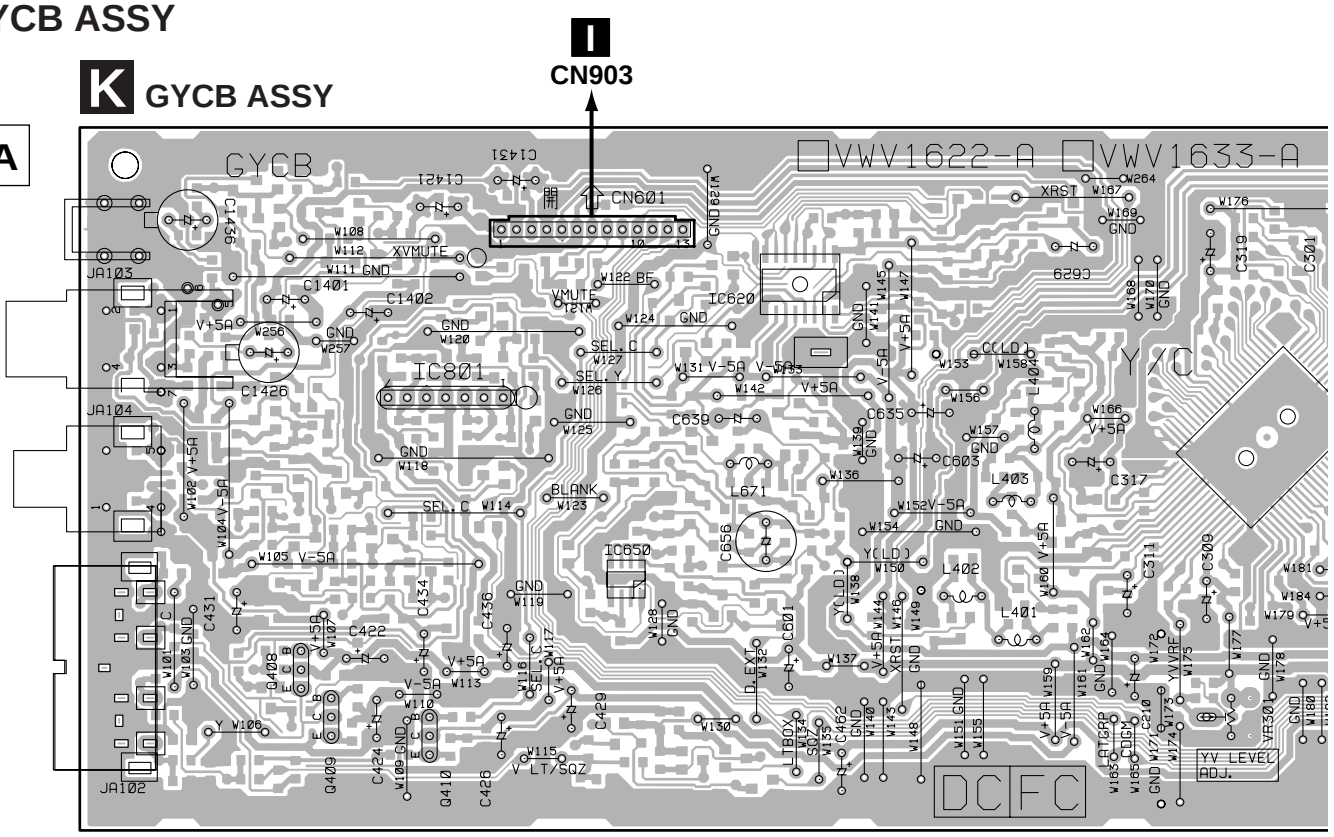
(VNP1662-C)

5 Q981	Q905 Q906 Q903 Q904 Q902 Q908 Q901	Q803 Q212 Q805	Q211 Q213 Q215 Q214 Q269	Q270 Q262 Q261

4.5 GYCB ASSY

K GYCB ASSY

SIDE A

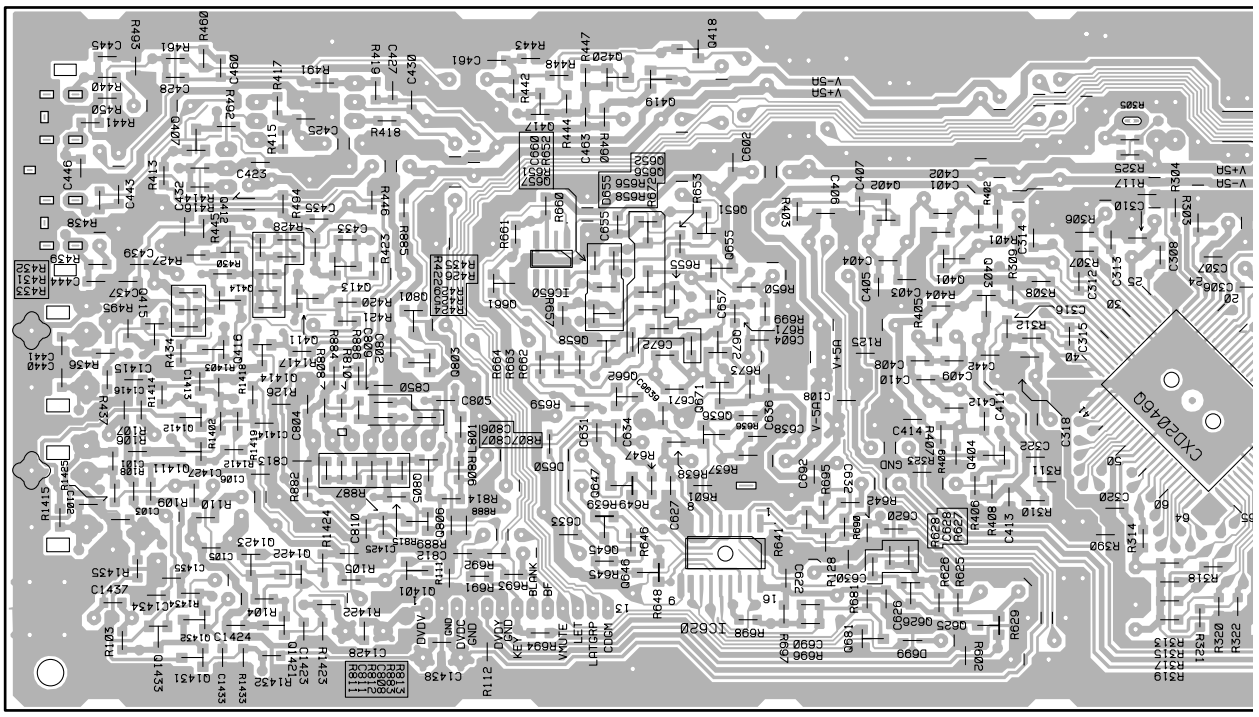


Q408 IC801
Q409 Q410

VR301

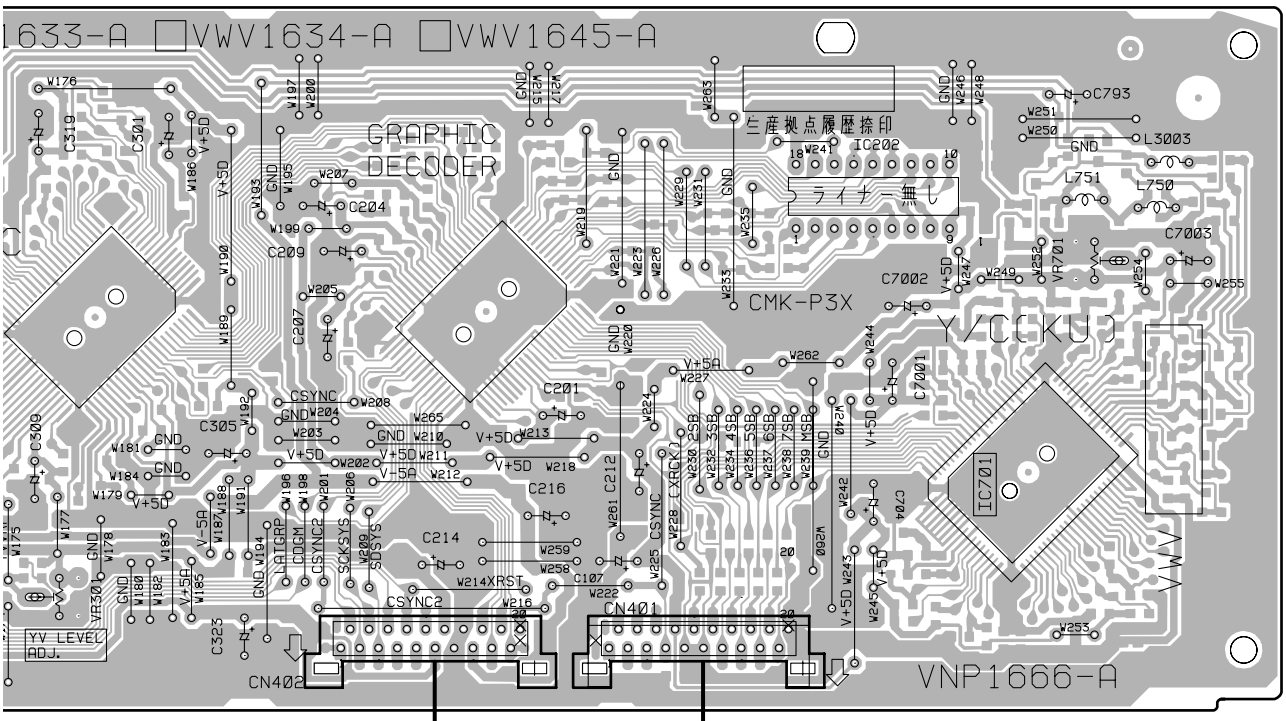
K GYCB ASSY

SIDE B



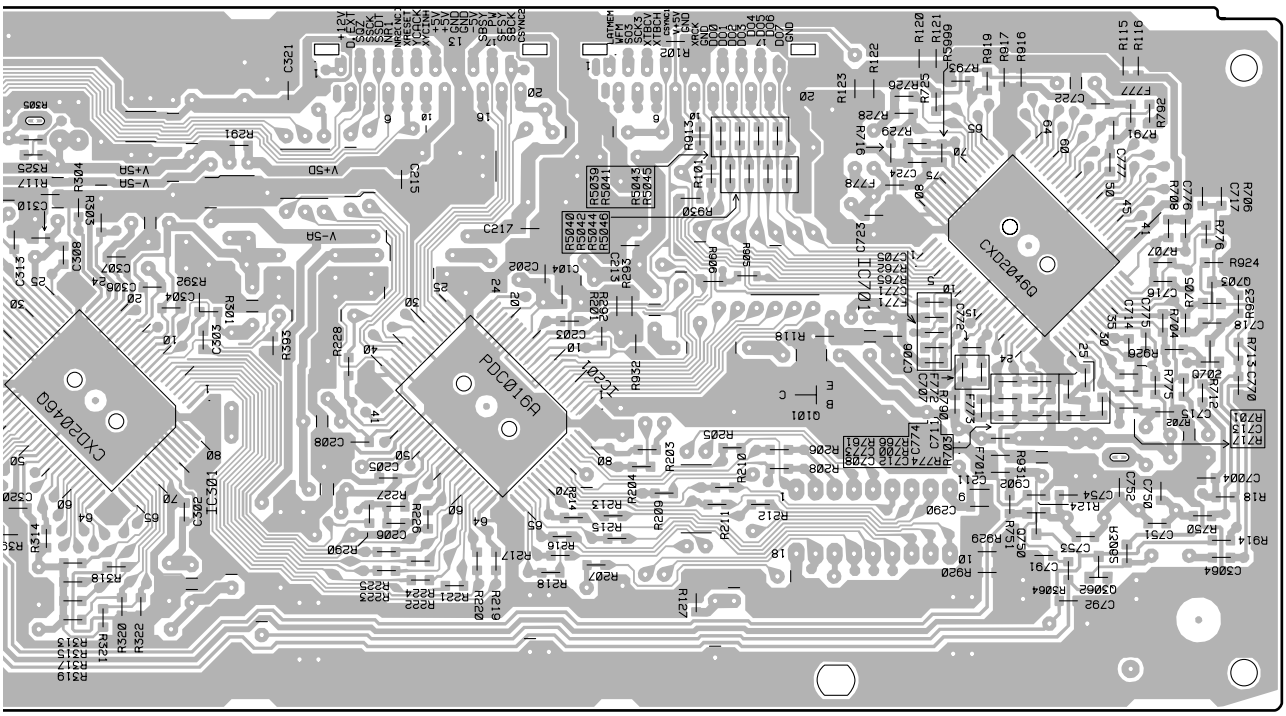
Q415 Q407 Q412 Q413 Q801 Q661 Q417 Q420 Q651 Q402 Q401 IC301
Q1433 Q1412 Q414 Q803 IC650 Q419 Q655 Q626 Q403
Q1411 Q416 Q805 Q652 Q672 Q681 Q404
Q1432 Q1417 Q806 Q656–Q658 Q671 Q625
Q1431 Q1421–Q1423 Q1401 Q662 Q636
Q645–Q647 IC620

SIDE A

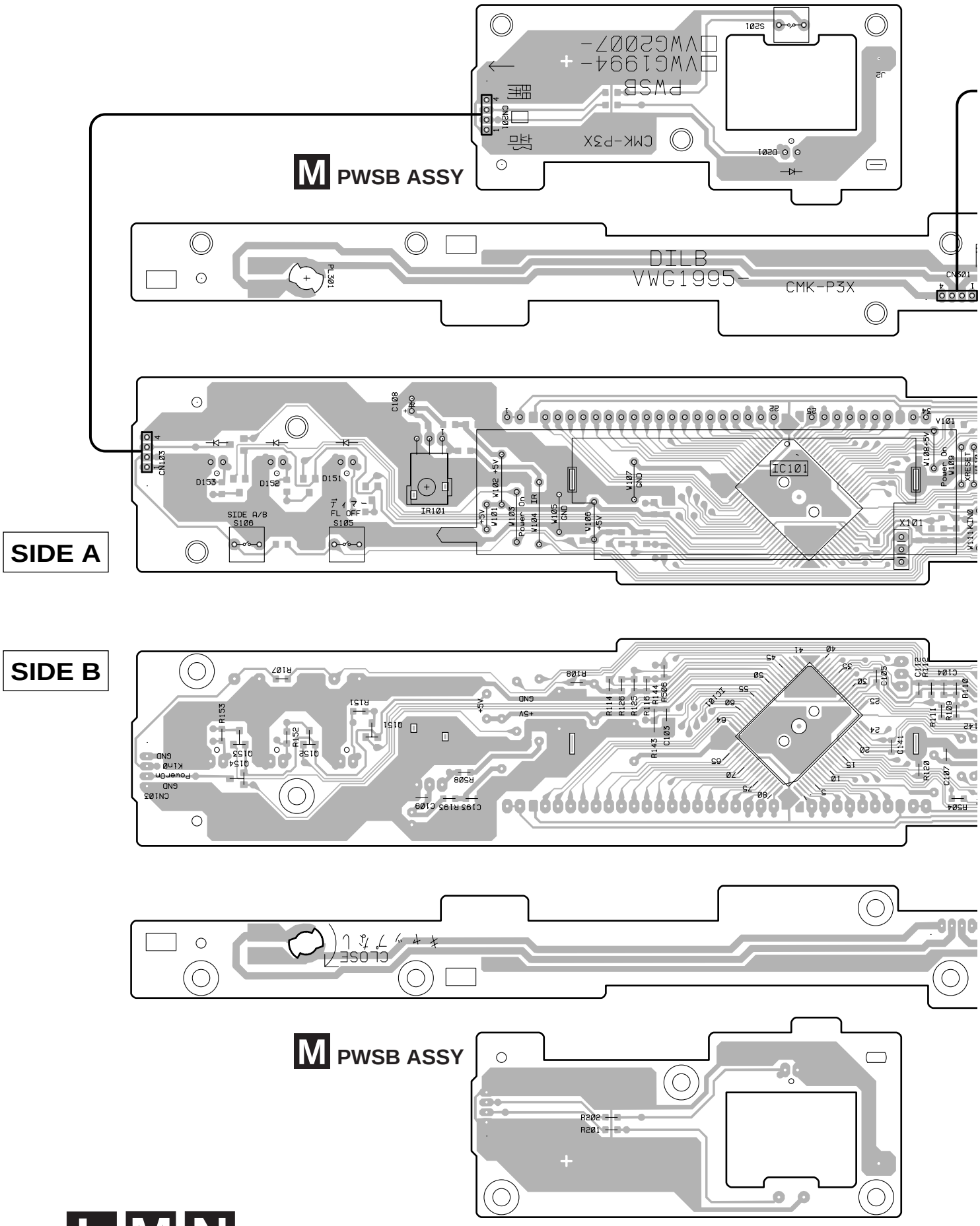


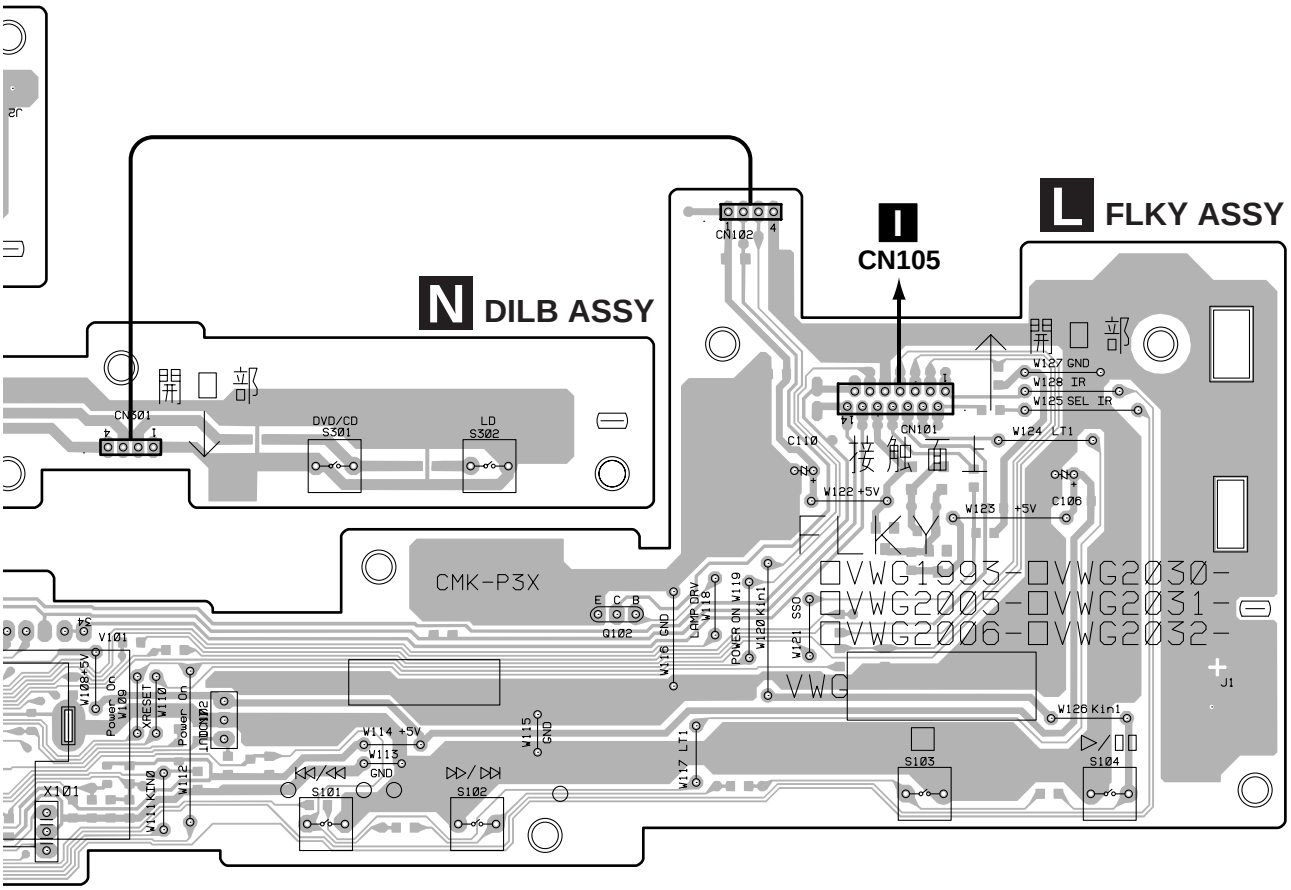
(VNP1666-A)

SIDE B



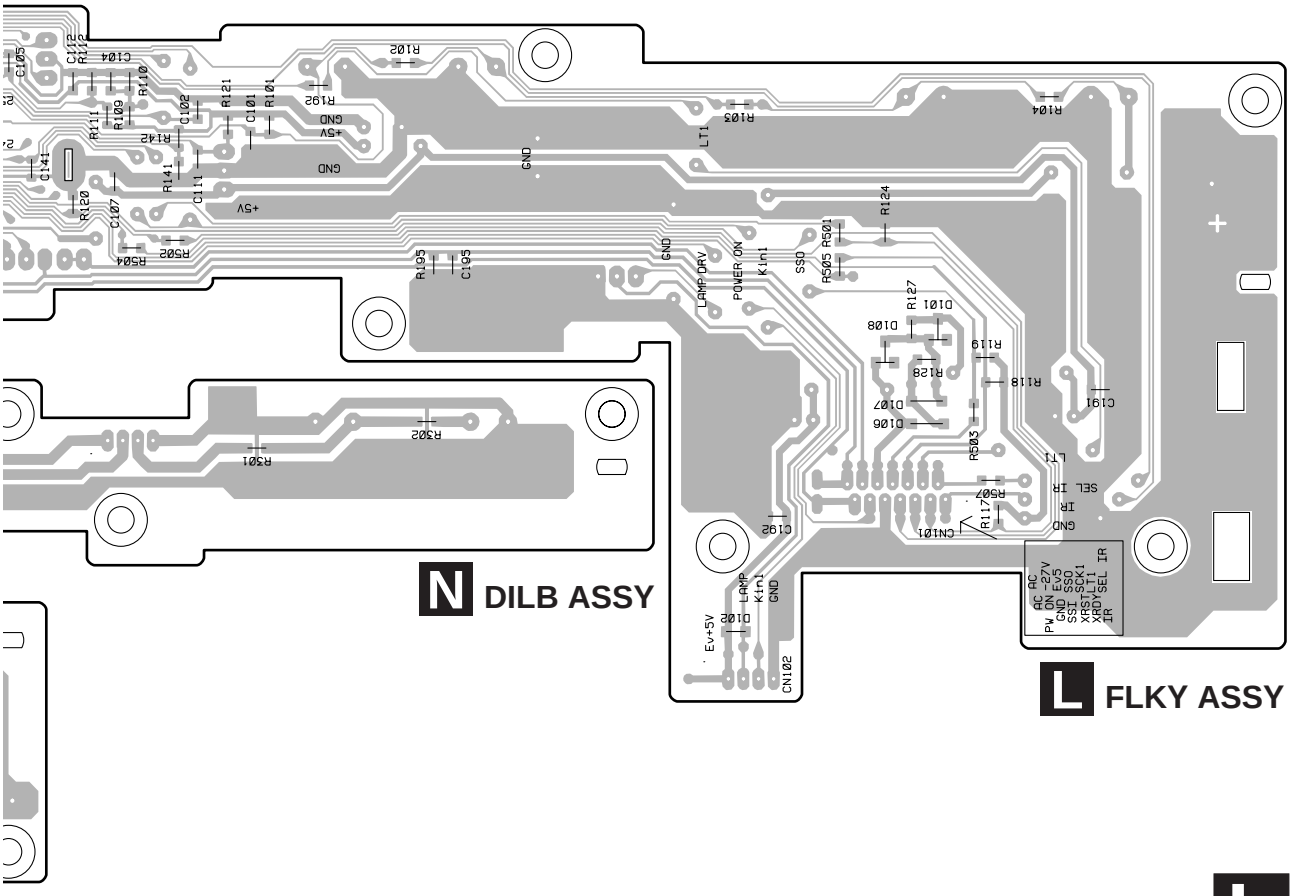
4.6 FLKB, PWSB and DILB ASSEMBLIES





SIDE A

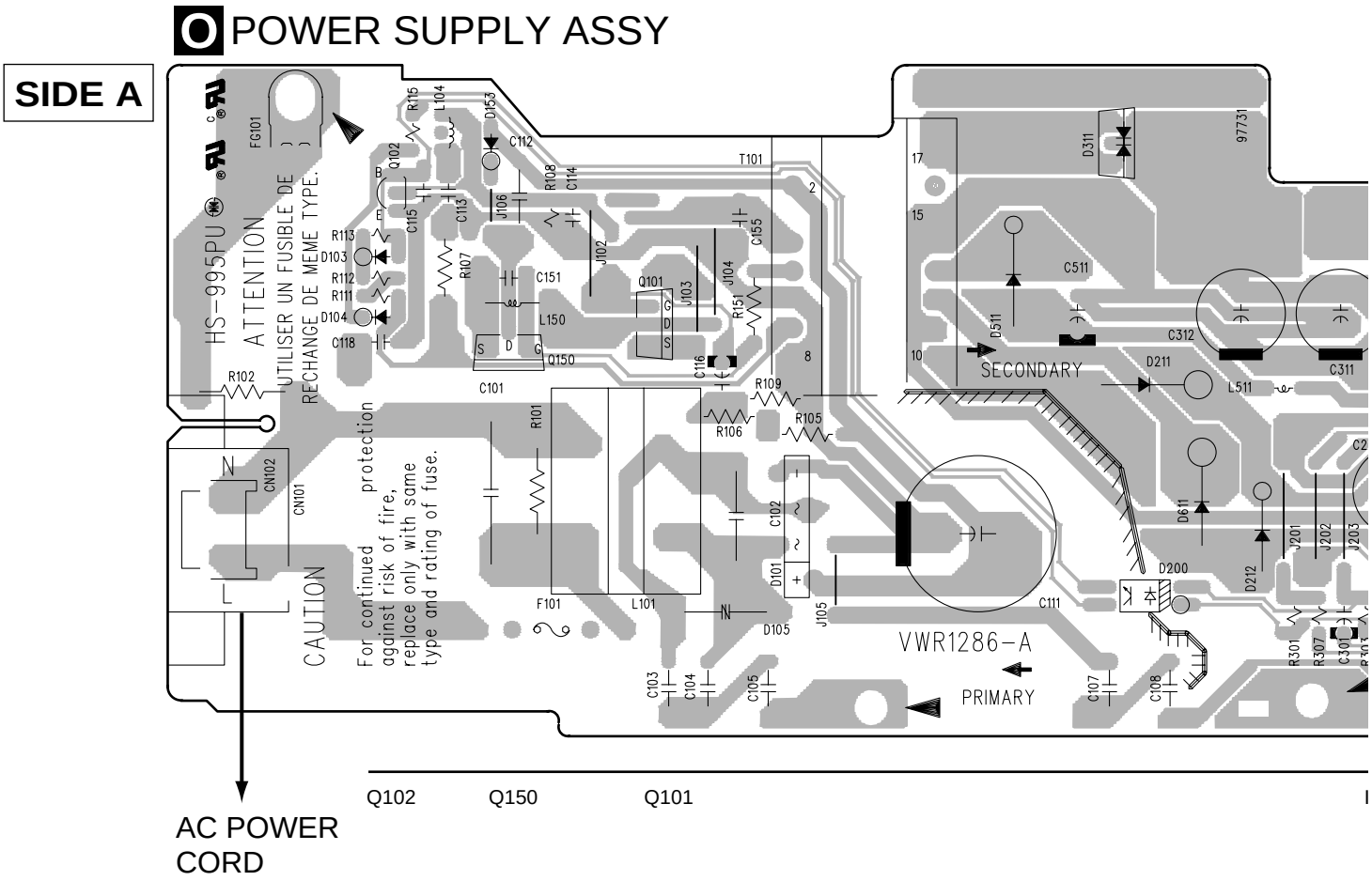
(VNP1663-B)

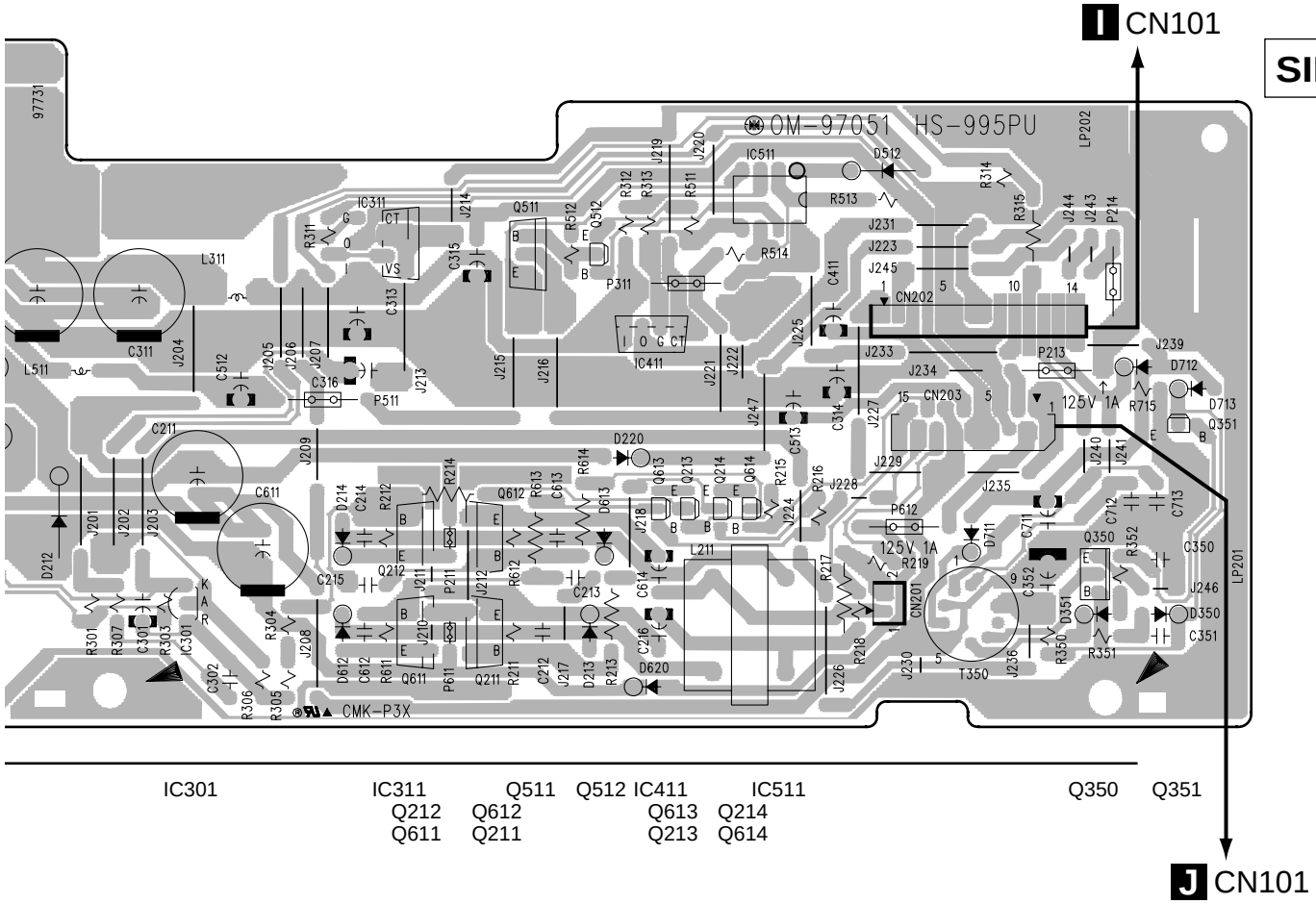


SIDE B

4.7 POWER SUPPLY ASSY

● **FOR KU/CA TYPE**



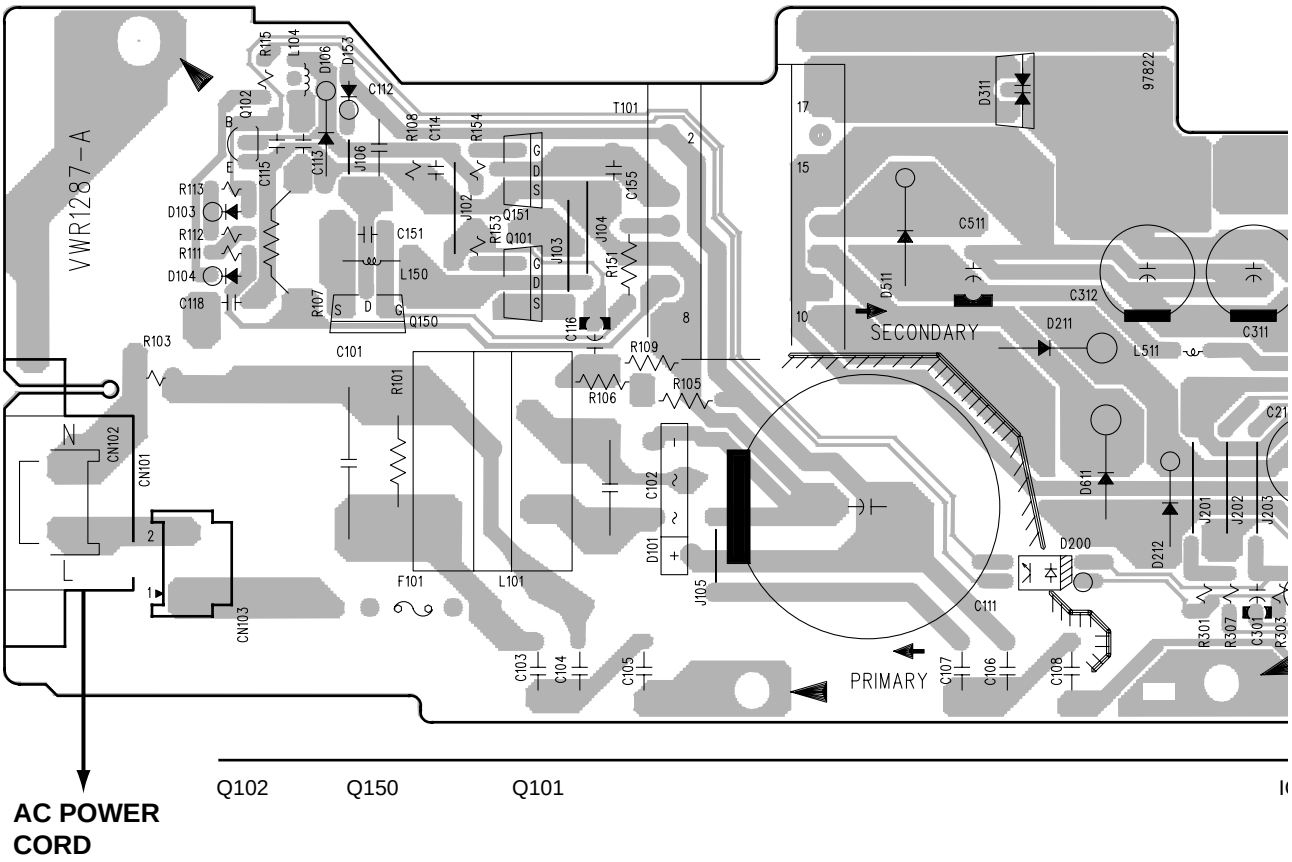


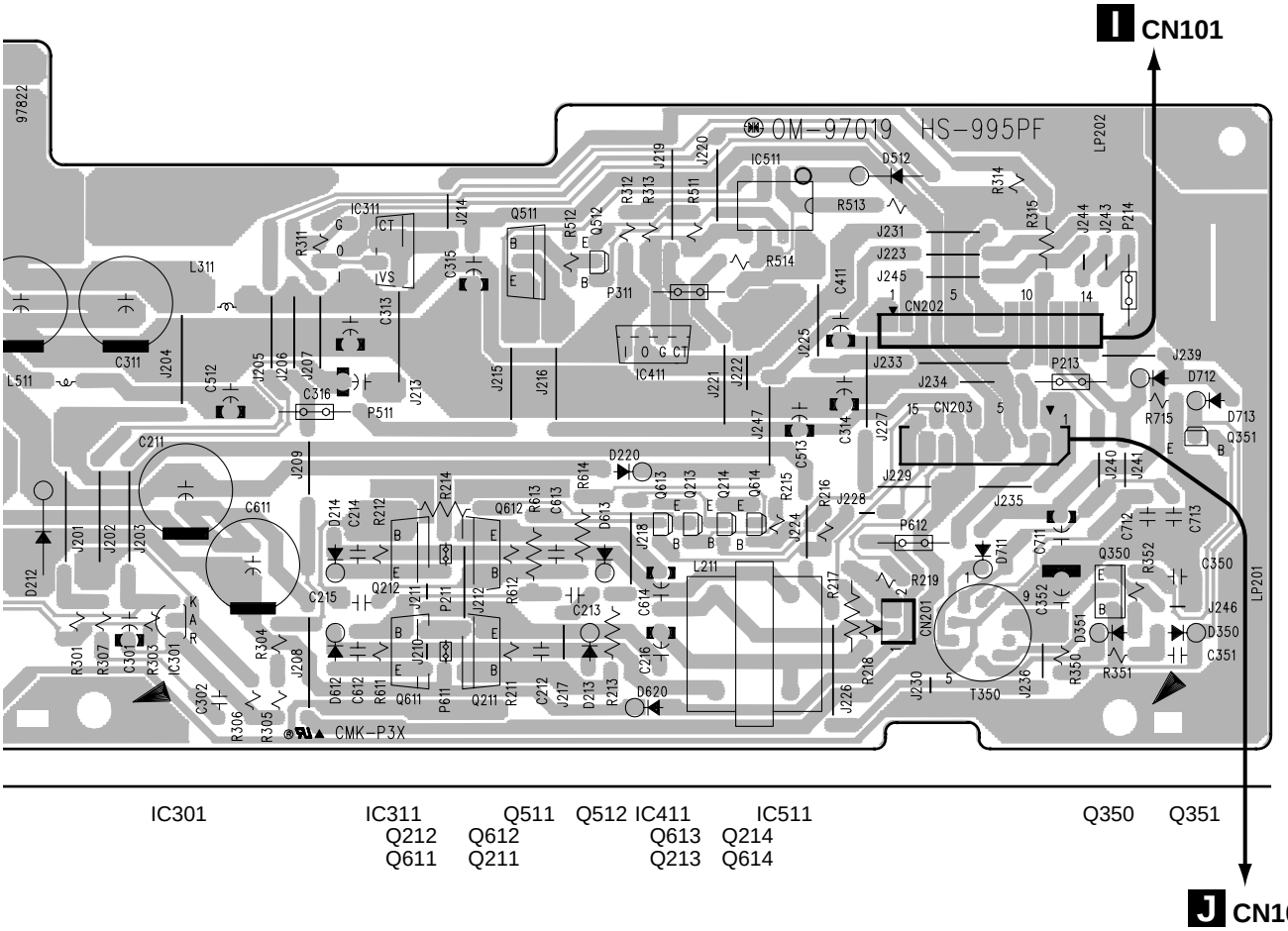
IC301 IC311 Q511 Q512 IC411 IC511 Q350 Q351
Q212 Q612 Q613 Q214
Q611 Q211 Q213 Q614

● FOR RD/RA TYPE

POWER SUPPLY ASSY

SIDE A





IC301

IC311 Q212 Q611

Q511 Q612 Q211

Q512

IC411 Q613 Q213

IC511 Q214 Q614

Q350

Q351

5. PCB PARTS LIST

NOTES: ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
●*When ordering resistors, first convert resistance values into code form as shown in the following examples.*
Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
560 Ω → 56×10^1 → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47×10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562×10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.		Remarks
		KU/CA type	RD/RA type	
NSP	MACB ASSY	VWM1507	VWM1507	
NSP	├LMSB ASSY	VWG1554	VWG1554	
NSP	├PKSB ASSY	VWG1555	VWG1555	
NSP	└FG ASSY	VWG1556	VWG1556	
NSP	MECHB ASSY	VWM1721	VWM1721	
NSP	├CNNB ASSY	VWG1792	VWG1792	
NSP	├TNMB ASSY	VWG1793	VWG1793	
NSP	├DCSB ASSY	VWG1794	VWG1794	
NSP	├LCSB ASSY	VWG1795	VWG1795	
NSP	└BISB ASSY	VWG1796	VWG1796	
NSP	FLKB ASSY	VWM1879	VWM1879	
	├FLKY ASSY	VWG2005	VWG2005	
NSP	├PWSB ASSY	VWG1994	VWG1994	
NSP	└DILB ASSY	VWG1995	VWG1995	
	CLDM ASSY	VWS1358	VWS1358	
	DVDM ASSY	VWS1377	VWS1377	
	GYCB ASSY	VWV1633	VWV1633	
⚠	POWER SUPPLY ASSY	VWR1286	VWR1287	

■ PCB PARTS LIST

Mark	No.	Description	Part No.
	A LMSB ASSY		
	SWITCHES		
	S101-S103		VSG1006
	OTHERS		
	CN101	10P CONNECTOR	52044-1045
	B PKSB ASSY		
	SWITCHES		
	S104,S105		VSG1006
	C FG ASSY		
	SEMICONDUCTOR		
	D101		GP1S24
	D CNNB ASSY		
	OTHERS		
	CN903	23P FFC CONNECTOR	52030-2310
	CN901	26P FFC CONNECTOR	52030-2610
	CN905,CN906	KR CONNECTOR	S2B-PH-K-S
	CN902	26P FFC CONNECTOR	SLW26R-1C7
	CN904	27P FFC CONNECTOR	SLW27R-1C7
	E TNMB ASSY		
	OTHERS		
	CN911	6P FFC CONNECTOR	52044-0645
	CN912	KR CONNECTOR	B2B-PH-K-S
	CN913	KR CONNECTOR	B3B-PH-K-S
	F DCSB ASSY		
	SWITCH		
	S902		DSG1017
	OTHERS		
	CN915	KR CONNECTOR	S2B-PH-K-S
	G LCSB ASSY		
	SWITCH		
	S903		DSG1017
	OTHERS		
	CN916	KR CONNECTOR	S2B-PH-K-S
	H BISB ASSY		
	SWITCH		
	S901		DSG1017
	OTHERS		
	CN914	KR CONNECTOR	S2B-PH-K-S

Mark	No.	Description	Part No.
	I DVDM ASSY		
	SEMICONDUCTORS		
	IC301		ADC1175CIJMX
	IC171		BA10393F
⚠	IC401		BA178M08FP
	IC151		BA6797FP
	IC813		CY2081SL-611
	IC702		HM514800CJ-7
	IC101		LA9700M
	IC201		LC78650NE
	IC802		MB811171622A-100FN
	IC801		MB86371C
	IC815,IC816		MC14577CF
	IC271,IC302		NJM2100M
	IC203		NJM2107F
	IC901		PD2058A
	IC601		PD3381A
	IC701		PD4833A
	IC501		PD4889A
	IC502		SRM2B256SLMX70
	IC202,IC204,IC206,IC902		TC4W53F
	IC604		TC551001BFL-85
	IC503		TC74HC573AF
	IC804		TC74HCT541AF
	IC303		TC74HCU04AF
	IC807,IC808		TC74LCX245FT
	IC821		TC74VHC00FT
	IC814,IC820		TC74VHC02FT
	IC505,IC605		TC74VHC139FT
	IC703		TC74VHC14FT
	IC504		TC74VHC20FT
	IC805,IC806,IC809		TC74VHC541FT
	IC506		TC74VHCT245AFT
	IC817		TC74VHCT541AFT
	IC811,IC818,IC819		TC7SHU04F
	IC810		TC7WU04F
	IC603		VYW1612
⚠	Q401		2SB1260
	Q108		HN1K03FU
	Q455,Q831,Q832,Q851,Q852		IMT1A
	Q871,Q872		IMT1A
	Q103,Q402,Q403,Q873		IMX1
	Q102,Q104,Q291,Q301		IMZ1A
	Q106,Q603		PDTA114EK
	Q107,Q109,Q602		PDTC114EK
	Q601,Q771,Q772		PDTC114TK
	D301		KV1410
	D171,D172		MA152WK
	D601		RB501V-40
	COILS AND FILTERS		
	F771,F778,F779	CHIP BEAD	DTF1067
	F896	FERRITE CORE	VTF1077
	F952	FERRITE CORE	VTF1080
	F801	VIDEO FILTER	VTF1098
	F401-F406	CHIP EMI FILTER	VTH1037
	L301	(1.5µH)	VTL1059
	L101,L302	(10µH)	VTL1061
	L802,L803	(22µH)	VTL1067
	L335,L340,L342	CHIP BEAD	VTL1074
	L777,L780-L787,L895	CHIP BEAD	VTL1075

Mark	No.	Description	Part No.
	L897-L899	CHIP BEAD	VTL1075
	L100	CHIP BEAD	VTL1119

CAPACITORS

	C623	CCSRCH100D50
	C152,C208,C291,C612,C613	CCSRCH101J50
	C700,C735,C737,C739	CCSRCH101J50
	C897,C898,C991	CCSRCH101J50
	C111,C139,C215,C231,C232	CCSRCH151J50
	C248	CCSRCH151J50
	C125,C148,C329	CCSRCH180J50
	C112,C118	CCSRCH220J50
	C121,C130,C199,C319,C324	CCSRCH330J50
	C120	CCSRCH331J50
	C310,C323,C327	CCSRCH470J50
	C230	CCSRCH471J50
	C126,C331,C838	CCSRCH560J50
	C127,C330,C863,C873,C882	CCSRCH5R0C50
	C160	CCSRCH680J50
	C401,C417,C892	CEHV470M10
	C101,C104,C201,C325,C601	CEV101M6R3
	C701,C704,C706,C801	CEV101M6R3
	C803,C804,C813-C815,C826	CEV101M6R3
	C901	CEV101M6R3
	C123,C158,C412,C414	CEV220M16
	C835,C895	CEV221M4
	C131,C135,C205,C206,C301	CEV470M6R3
	C303,C404,C406,C408,C410	CEV470M6R3
	C501,C504,C832,C836,C841	CEV470M6R3
	C887	CEV470M6R3
	C211	CKSQYB104K25
	C100,C109,C124,C216,C220	CKSQYB105K10
	C229,C234,C275,C308,C326	CKSQYB105K10
	C332,C333,C730,C731	CKSQYB105K10
	C416,C818,C823,C828	CKSQYF105Z16
	C213,C292,C309,C321	CKSRYB102K50
	C105,C106,C108,C146,C147	CKSRYB103K50
	C151,C154-C157,C161,C207	CKSRYB103K50
	C217,C221,C247,C276,C318	CKSRYB103K50
	C320,C620,C705,C722,C772	CKSRYB103K50
	C859	CKSRYB103K50
	C143,C162-C165,C223,C224	CKSRYB104K16
	C242,C273,C274,C311,C312	CKSRYB104K16
	C315	CKSRYB104K16
	C141,C271	CKSRYB222K50
	C328	CKSRYB223K25
	C122	CKSRYB473K16
	C102,C103,C113,C129	CKSRYF104Z16
	C132-C134,C136,C137,C159	CKSRYF104Z16
	C166,C191,C202-C204,C209	CKSRYF104Z16
	C214,C218,C219,C222	CKSRYF104Z16
	C226-C228,C235,C237,C241	CKSRYF104Z16
	C246,C302,C304,C305,C317	CKSRYF104Z16
	C322,C402,C403,C405,C407	CKSRYF104Z16
	C409,C411,C413,C415	CKSRYF104Z16
	C502,C503,C505-C509	CKSRYF104Z16
	C602-C611,C614,C615,C617	CKSRYF104Z16
	C621,C622,C702,C703	CKSRYF104Z16
	C707-C721,C723,C732-C734	CKSRYF104Z16
	C736,C738,C740-C742,C771	CKSRYF104Z16
	C791,C800,C802,C805-C812	CKSRYF104Z16
	C816,C817,C819-C822	CKSRYF104Z16
	C824,C825,C827,C829,C830	CKSRYF104Z16
	C833,C834,C837,C839,C840	CKSRYF104Z16
	C842-C848,C861,C862,C867	CKSRYF104Z16
	C871,C872,C876,C878,C881	CKSRYF104Z16
	C883,C888-C890,C902-C905	CKSRYF104Z16
	C911	CKSRYF104Z16
	C852,C855,C857,C858 (2.2µF)	VCG1031
	C922-C924 (2.2µF)	VCG1031
	VC301 (40pF)	VCM1010

RESISTORS

	R602,R603,R610 (47Ω)	DCN1090
	R613,R618 (47Ω)	DCN1090
	R507,R508,R624,R628 (10kΩ)	DCN1094
	R633,R703,R704,R717 (10kΩ)	DCN1094
	R718,R745,R746,R761 (10kΩ)	DCN1094
	R762,R792,R812,R813 (10kΩ)	DCN1094
	R137,R501,R502 (20Ω)	DCN1104
	R505,R506,R604-R607 (20Ω)	DCN1104
	R712,R713,R719 (20Ω)	DCN1104
	R724,R748,R749,R791 (20Ω)	DCN1104
	R802,R803,R808,R901 (20Ω)	DCN1104
	R905,R907,R909,R910 (20Ω)	DCN1104
	R912,R913,R916-R919 (20Ω)	DCN1104
	R101,R11-R14,R141	RS1/10S0R0J
	R15-R17,R171,R18	RS1/10S0R0J
	R201-R203,R300,R319,R333	RS1/10S0R0J
	R411-R413,R701,R775,R776	RS1/10S0R0J
	R891,R893,R902,R908,R961	RS1/10S0R0J
	R205	RS1/10S101J
	R835,R839,R855,R859,R875	RS1/16S1001F
	R881	RS1/16S1001F
	R834,R854,R874	RS1/16S1201F
	R823-R825	RS1/16S1500F
	R117,R118	RS1/16S1501F
	R126	RS1/16S1502F
	R241,R247	RS1/16S2202F
	R110,R153,R155,R168,R169	RS1/16S2702F
	R173,R174,R213,R228,R229	RS1/16S2702F
	R248	RS1/16S2702F
	R152,R156,R158-R164,R167	RS1/16S4702F
	R170,R172,R175,R194,R227	RS1/16S4702F
	R836,R856,R879	RS1/16S5600F
	VR801 (1kΩ)	VCP1125
	Other Resistors	RS1/16S□□□J

OTHERS

	CN903 PH CONNECTOR	S13B-PH-SM3
	CN101 PH CONNECTOR	S14B-PH-SM3
	CN801 PH CONNECTOR	S4B-PH-SM3
	FLEXIBLE CABLE	VDA1681
	TP100,TP200,TP300,TP400 CHECEK CHIP	VKF1001
	CN201 CONNECTOR	VKN1324
	CN106 7P CONNECTOR	VKN1411
	CN105 14P CONNECTOR	VKN1418
	CN901,CN902 22P CONNECTOR	VKN1426
	CN103 26P CONNECTOR	VKN1430
	KN1-KN3 EARTH METAL FITTING	VNF1109
	LABEL	VRW1750
	X602 CERAMIC RESONATOR(20MHz)	VSS1114
	X501 CERAMIC RESONATOR(10MHz)	VSS1115
	X901 CERAMIC RESONATOR(24MHz)	VSS1118

Mark	No.	Description	Part No.

J CLDM ASSY

SEMICONDUCTORS

	IC761		BA10393F
	IC251,IC601,IC905,IC906		BA4560F
	IC352		CA0002AM
	IC203		CY2081SL-611
	IC171,IC803		LA6510
	IC400		LA7134M
	IC801		LA9425
	IC901		LA9430M
	IC908		LC78625E
	IC182,IC183		MM6558XF
	IC501		MN4777AS
⚠	IC221		NJM78L08A
⚠	IC222		NJM79L08A
	IC500		PD0234A
	IC202		PD0236AM
	IC101		PD0266A2
	IC201		PE8001A
	IC902		TA8410AK
	IC181,IC184,IC762,IC907		TC4W53F
	IC321,IC341		TC74HCU04AF
	IC205-IC207		TC7S02F
	IC102		TC7S32F
	IC204,IC208		TC7WU04F
	Q121,Q182		2PB709A
	Q269,Q270,Q391-Q393,Q401		2PD601A
	Q441,Q481,Q803,Q811		2PD601A
	Q903-Q906		2PD601A
	Q834		2SA854S
	Q152		2SC3082K
	Q261,Q262		2SD2114K
	Q211,Q213,Q217,Q394,Q981		PDTA124EK
	Q122,Q181,Q214,Q215,Q233		PDTC124EK
	Q901,Q908		PDTC124EK
	D101,D181,D250,D902,D981		1SS355
	D221		EP10QY03
	D311,D550		KV1851
	D115		UDZS5.1B

COILS AND FILTERS

	F501-F508	CHIP BEAD	DTF1069
	L9294,L9295	CHIP INPEDER	DTL1028
	L414		LAU100J
	L401		LAU101J
	L352,L821-L823		LAU181J
	L209,L241,L311,L312,L331		LAU220J
	L351,L413,L422,L461,L491		LAU220J
	L831		LAU220J
	L412,L482,L511		LAU270J
	L242,L244		LAU2R2J
	L431,L432,L512		LAU430J
	L243		LAU470J
	L462		LAU560J
	L415,L501		LAU8R2J
	L832		LFA220J
	L463		LFA561J
	L323,L343	COIL	PTL1003
	L322,L342	COIL	RTF1167
	F238-F240,F581,F664,F665	CHIP SOLID INDUCTOR	VTF1096
	F9321,F9341	CHIP SOLID INDUCTOR	VTF1096
	F520	14.3MHz FILTER	VTF1099
	L205,L224	CHIP BEAD	VTL1098
	L9242	CHIP BEAD	VTL1101

CAPACITORS

	C229,C418,C419,C421,C434	CCSQCH100D50
	C513,C535	CCSQCH100D50
	C353,C821,C837-C839,C843	CCSQCH101J50
	C864,C865	CCSQCH101J50
	C921,C943	CCSQCH102J50
	C432,C436,C483,C516,C553	CCSQCH120J50
	C413	CCSQCH121J50
	C403,C415,C484,C502	CCSQCH150J50
	C355,C823,C901	CCSQCH151J50
	C313,C352	CCSQCH180J50
	C205,C824,C973	CCSQCH220J50
	C255,C256,C414,C506	CCSQCH221J50
	C230,C354,C411,C417,C431	CCSQCH270J50
	C830	CCSQCH270J50
	C104,C105,C257,C258,C356	CCSQCH330J50
	C433,C451,C510,C512	CCSQCH330J50
	C351,C402,C485	CCSQCH390J50
	C217,C222,C401,C462	CCSQCH470J50
	C925	CCSQCH471J50
	C941	CCSQCH561J50
	C509	CCSQCH5R0C50
	C358,C511,C806	CCSQCH680J50
	C920	CCSQCH681J50
	C435,C559,C822,C829	CCSQCH7R0D50
	C357,C825	CCSQCH820J50
	C461,C465	CCSQCH910J50
	C123	CCSQSL102J50
	C439	CEAL100M6R3
	C489	CEAL101M6R3
	C251	CEAL470M6R3
	C383	CEALR47M50
	C986	CEANP3R3M50
	C187,C441,C856	CEANP470M6R3
	C221,C394,C975	CEAT100M50
	C332,C391,C424,C437,C493	CEAT101M10
	C505,C538,C540,C542,C558	CEAT101M10
	C583,C832,C834,C884	CEAT101M10
	C246	CEAT102M6R3
	C269,C270,C867,C929	CEAT1R0M50
	C981,C982	CEAT220M25
	C927,C928,C931	CEAT220M50
	C521	CEAT221M6R3
	C102,C209,C223,C224	CEAT470M10
	C253,C254,C261-C264,C316	CEAT470M10
	C318,C322,C324,C342,C344	CEAT470M10
	C382,C390,C802,C804,C842	CEAT470M10
	C852,C854,C859,C860	CEAT470M10
	C984	CEAT4R7M50
	C922	CEATR47M50
	C936,C940	CEJA101M6R3
	C902	CEJA220M50
	C863,C934	CEJA2R2M50
	C242,C244	CEJA470M6R3
	C862	CEJA4R7M50
	C486	CFTLA154J50

Mark	No.	Description	Part No.
	C491		CFTLA683J50
	C426,C910		CKSQYB102K50
	C845,C881,C917,C942		CKSQYB104K25
	C555,C933		CKSQYB105K10
	C923		CKSQYB153K25
	C911		CKSQYB154K16
	C903		CKSQYB222K50
	C379,C380		CKSQYB392K50
	C373-C376,C388,C912,C932		CKSQYB472K50
	C963		CKSQYB473K25
	C763		CKSQYB682K50
	C106-C112,C117,C118,C121		CKSQYF103Z50
	C124,C153,C155,C173,C181		CKSQYF103Z50
	C183,C184,C188,C189		CKSQYF103Z50
	C191,C192,C208,C210		CKSQYF103Z50
	C231-C237,C239-C241,C243		CKSQYF103Z50
	C245,C247-C250,C252		CKSQYF103Z50
	C281,C282,C311,C314,C315		CKSQYF103Z50
	C317,C321,C323,C325,C331		CKSQYF103Z50
	C341,C343,C345,C381,C386		CKSQYF103Z50
	C389,C422,C442,C508		CKSQYF103Z50
	C514,C515,C517,C533,C534		CKSQYF103Z50
	C536,C552,C554,C761,C762		CKSQYF103Z50
	C801,C803,C811,C831,C833		CKSQYF103Z50
	C836,C841,C846,C851,C853		CKSQYF103Z50
	C861,C882,C883,C885,C924		CKSQYF103Z50
	C935,C937,C939,C945-C947		CKSQYF103Z50
	C962,C974,C983		CKSQYF103Z50
	C101,C103,C122,C151,C152		CKSQYF104Z25
	C171,C172,C182,C199,C218		CKSQYF104Z25
	C267,C268,C326,C346,C385		CKSQYF104Z25
	C387,C392,C404,C405,C420		CKSQYF104Z25
	C423,C425,C430,C438,C440		CKSQYF104Z25
	C443,C452,C488,C492,C494		CKSQYF104Z25
	C504,C507,C519,C520,C531		CKSQYF104Z25
	C537,C541,C557,C601		CKSQYF104Z25
	C603,C604,C764,C805,C847		CKSQYF104Z25
	C857,C858,C866,C913,C914		CKSQYF104Z25
	C919,C971,C972,C976		CKSQYF104Z25
	C582,C584,C586		CKSQYF105Z16
	C186,C602,C855,C926,C930		CKSQYF223Z50
	C938		CKSQYF223Z50
	C377,C378,C393,C908,C909		CKSQYF224Z25
	C154,C156,C174,C312,C463		CKSQYF473Z50
	C826,C828		CKSQYF473Z50
	C265,C266		CQMBA332J50
	VC301 (20pF)		VCM-008

RESISTORS

	R751	RA4C0R0J
	R753	RA4C221J
	R203,R752	RA4C471J
	R425,R833,R834,R837,R839	RN1/10SE1002D
	R891,R892	RN1/10SE1002D
	R152,R156	RN1/10SE1003D
	R251,R252	RN1/10SE1602D
	R541	RN1/10SE1800D
	R540	RN1/10SE3300D
	R151,R259,R260,R277,R278	RN1/10SE3302D
	R893,R894	RN1/10SE3302D
	R153,R154	RN1/10SE4702D
	VR450 (2.2kΩ)	PCP1025

Mark	No.	Description	Part No.
	VR603 (4.7kΩ)		PCP1028
	VR604,VR607-VR609 (47kΩ)		PCP1031
	Other Resistors		RS1/10S□□□J

OTHERS

	CN103	CONNECTOR 6P	52045-0645
	CN102	CONNECTOR	52045-1045
	CN101	CONNECTOR	52045-1545
	CN802	CONNECTOR	B11P-SHF-1AA
	CN201	CONNECTOR	B4B-PH-K-S
		SCREW	BBZ30P060FCC
	JA101,JA102	JACK	RKN1004
	JA331	OPTICAL OUTPUT JACK	TOTX178
		PCB BINDER	VEF1040
	JA251	JACK	VKB1070
	JA341	JACK	VKB1111
	CN111,CN122	22P FFC CONNECTOR	VKN1253
	CN801	27P FFC CONNECTOR	VKN1258
	CN401,CN402	B TO B CONNECTOR 20P	VKN1403
		SCREW PLATE	VNE1948
	X101	CERAMIC RESONATOR(9MHz)	VSS1040
	X311	CRYSTAL RESONATOR (16MHz)	VSS1081
	X312	CRYSTAL RESONATOR (18.432MHz)	VSS1116
	X550	CRYSTAL RESONATOR (28MHz)	VSS1131

K GYCB ASSY

SEMICONDUCTORS

	IC701	CXD2046Q
	IC801	TA7302P
	IC620	TC74HC4053AF
	IC650	TC7W00F
	Q1414,Q3062,Q407,Q411,Q414	2PB709A
	Q645,Q647,Q672,Q750	2PB709A
	Q1411,Q1412,Q1421,Q1422	2PD601A
	Q1431,Q1432,Q412,Q413	2PD601A
	Q415,Q416,Q626,Q636,Q646	2PD601A
	Q655-Q658,Q661,Q662,Q671	2PD601A
	Q702,Q703,Q805,Q806	2PD601A
	Q408-Q410	2SC1740S
	Q1423,Q1433,Q417,Q420,Q651	PDTA124EK
	Q803	PDTA124EK
	Q1401,Q418,Q419,Q652,Q681	PDTC124EK
	Q801	PDTC124EK
	D650,D655,D699	MA111

COILS AND FILTERS

	F701,F771-F773	CHIP BEAD
	F777,F778	CHIP BEAD
	L3003,L750,L751	
	L671	
	L801	

CAPACITORS

	C433	CCSQCH100D50
	C655,C771,C772,C777	CCSQCH101J50
	C750,C753	CCSQCH220J50
	C672,C805	CCSQCH390J50
	C671	CCSQCH391J50
	C754	CCSQCH470J50

Mark	No.	Description	Part No.
	C752		CCSQCH560J50
	C751		CCSQCH6R0D50
	C3064		CCSQCH910J50
	C424		CEAL101M6R3
	C1421,C1431		CEAL4R7M16
	C656		CEANP100M16
	C629		CEANP220M10
	C1401,C1402,C210,C216,C422		CEAT101M10
	C601,C7001-C7003,C704		CEAT101M10
	C431,C434		CEAT221M6R3
	C1426,C1436		CEAT471M6R3
	C426,C429,C436,C462,C603		CEJA101M6R3
	C635,C793		CEJA101M6R3
	C639		CEJANP220M10
	C705		CKSQYB102K50
	C1413,C620,C628,C632,C638		CKSQYB104K25
	C706,C707,C722,C723,C804		CKSQYB104K25
	C810,C850		CKSQYB104K25
	C806,C807,C811		CKSQYF103Z50
	C1414-C1416,C1423-C1425		CKSQYF104Z25
	C1427,C1428,C1433-C1435		CKSQYF104Z25
	C1437,C1438,C213,C215,C217		CKSQYF104Z25
	C423,C425,C427,C428,C430		CKSQYF104Z25
	C432,C435,C437,C439,C460		CKSQYF104Z25
	C463,C602,C604,C622		CKSQYF104Z25
	C626,C627,C630,C631		CKSQYF104Z25
	C633,C634,C636,C660,C692		CKSQYF104Z25
	C7004,C711,C713,C714		CKSQYF104Z25
	C716,C717,C724,C770		CKSQYF104Z25
	C773-C776,C791,C792,C802		CKSQYF104Z25
	C808,C809,C812,C902		CKSQYF104Z25
RESISTORS			
	R424		RN1/10SE1801D
	R422		RN1/10SE2201D
	R700,R704,R705		RN1/10SE2700D
	R425		RN1/10SE2702D
	R420,R421,R707		RN1/10SE3301D
	R426,R701,R708		RN1/10SE4701D
	R653,R702,R706		RN1/10SE5601D
	R1422,R1432		RS1/10S2001F
	R717		RS1/10S3001F
	R1423,R1433		RS1/10S3301F
	R650		RS1/10S6800F
	R814		RS1/10S68R0F
	R1415,R1425,R1435,R436-R441		RS1/10S75R0F
	R627		RS1/10S75R0F
	Other Resistors		RS1/10S□□□J
OTHERS			
	JA102	SOCKET	AKP7012
	CN601	CONNECTOR	B13B-PH-K-S
		PCB BINDER	VEF1040
	JA103	JACK	VKB1100
	JA104	JACK	VKB1101
	CN401,CN402		VKN1390
		B TO B CONNECTOR 20P	
		SCREW PLATE	VNE1948

Mark	No.	Description	Part No.
L FLKY ASSY			
SEMICONDUCTORS			
	IC101		PE5018B
	IC102		S-806D
	Q102		DTD113ES
	Q151-Q154		PDTA124EK
	D102		1SS355
	D106		EP05Q04
	D101		RB411D
	D152,D153		SLP3118C51H
	D151		SLP4118C51H
SWITCHES			
	S101-S106		RSG1030
CAPACITORS			
	C106,C108,C110		CEAT470M10
	C101,C102,C104,C105,C111		CKSQYB102K50
	C141		CKSQYB102K50
	C103,C107,C109,C112,C192		CKSQYF104Z25
	C195		CKSQYF104Z25
RESISTORS			
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN102,CN103	CONNECTOR 4P	04P-FJ
	IR101	REMOTE RECEIVER UNIT	GP1U28X
	V101	FL TUBE	VAW1046
		SPACER	VEC1599
	CN101	14P CONNECTOR	VKN1274
		HOLDER	VNF1087
	X101	CERAMIC RESONATOR(5MHz)	VSS1104
M PWSB ASSY			
SEMICONDUCTOR			
	D201		SLP9118C51H
SWITCH			
	S201		RSG1030
RESISTORS			
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN201	CONNECTOR 4P	04R-FJ
N DILB ASSY			
SWITCHES			
	S301,S302		RSG1030
RESISTORS			
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN301	CONNECTOR 4P	04R-FJ
	PL301	LAMP	VEL1022

Mark	No.	Description	Part No.

ⓞ POWER SUPPLY ASSY (VWR1286)

SEMICONDUCTORS

⚠	IC301		AN1431T
	IC311		VZF1047
	IC411		VZF1048
	IC511		UPC358C
	IC200		PC817
⚠	Q101		VZF1050
⚠	Q150		VZF1049
⚠	Q102		2SC3377
⚠	Q211, Q212		T7F4T
	Q213, Q214, Q351		2SC1740S
	Q350		2SD2007
⚠	Q511		2SD2395
	Q512, Q613, Q614		2SA933S
⚠	Q611, Q612		T7F4S
⚠	D101		D2SB60F4004
⚠	D103		MTZJ2.7B
⚠	D104		1SS270A
⚠	D153, D220, D620		VZF1045
⚠	D211, D611		31DF2
⚠	D212		RD33FB2
⚠	D213, D214, D612, D613		10ELS2
⚠	D311		VZF1052
	D350, D512		1SS270A
	D351		MTZJ2.7B
⚠	D511		S2LA20
	D711		10ELS2
	D713		MTZJ30A
	D712		MTZJ8.2B
	D105		UK1V26

RESISTORS

⚠	R151	FUSIBLE R(RF25S8.2J)	VZC1058

OTHERS

⚠	FU101	FUSE(3.15A/125V)	VEK1044
⚠	FU211, FU611	FUSE(136°C)	VEK1033
⚠	FU213, FU612	FUSE(1A/125V)	VEK1036
⚠	P214, P511	FUSE(1.25A/60V)	VEK1045
⚠	P311	FUSE(1A/60V)	VEK1041

Mark	No.	Description	Part No.

ⓞ POWER SUPPLY ASSY (VWR1287)

SEMICONDUCTORS

⚠	IC301		AN1431T
	IC511		UPC358C
⚠	IC311		VZF1047
⚠	IC411		VZF1048
⚠	Q101,Q150,Q151		VZF1056
	Q512,Q613,Q614		2SA933S
	Q213,Q214,Q351		2SC1740S
⚠	Q102		2SC3377
	Q350		2SD2007
⚠	Q511		2SD2395
⚠	Q611,Q612		T7F4S
⚠	Q211,Q212		T7F4T
⚠	D213,D214,D612,D613		10ELS2
	D711		10ELS2
⚠	D104		1SS270A
	D350,D512		1SS270A
⚠	D211,D611		31DF2
⚠	D101		D2SB60F4004
⚠	D103		MTZJ2.7B
	D351		MTZJ2.7B
	D713		MTZJ30A
	D712		MTZJ8.2B
⚠	D200		PS2561L1-1VM
⚠	D106		RD18FB2
⚠	D212		RD33FB2
⚠	D511		S2LA20
⚠	D153,D220,D620		VZF1045
⚠	D311		VZF1052

RESISTRORS

⚠	R151		VZC1058

OTHERS

⚠	FU211,FU611	FUSE(136°C)	VEK1033
⚠	FU213,FU612	FUSE(1A/125V)	VEK1036
⚠	P311	FUSE(1A/60V)	VEK1041
⚠	P214,P511	FUSE(1.25A/60V)	VEK1045
⚠	F101	FUSE(3.15A/250V)	VEK1050

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanical Part]

CLD

❶ Tilt Offset Adjustment
❷ Tangential Direction Angle Adjustment for Side A
❸ Spindle Motor Centering Adjustment for Side A
❹ Crosstalk Check and Fine Tilt Offset Adjustment for Side A
❺ Focus Servo Loop Gain Adjustment
❻ Tracking Servo Loop Gain Adjustment
❼ Tangential Direction Angle Adjustment for Side B
❽ Spindle Motor Centering Adjustment for Side B
❾ Crosstalk Check and Fine Tilt Offset Adjustment for Side B

DVD

❿ RF MAX Adjustment
⓫ DVD Jitter Adjustment

[Electricall Part]

CLDM ASSY

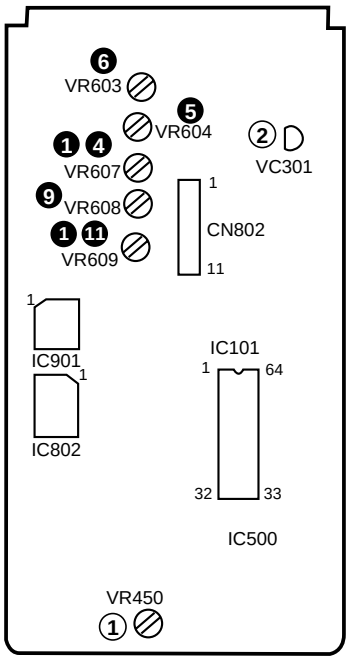
① Video Level Adjustment
② 18MHz Master Clock Adjustment

DVDM ASSY

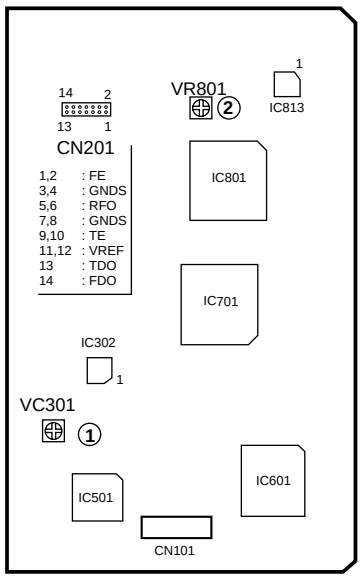
① VCO Offset Adjustment
② Video Output Level Adjustment

■ Adjustment Points (PCB Part)

CLDM ASSY



DVDM ASSY

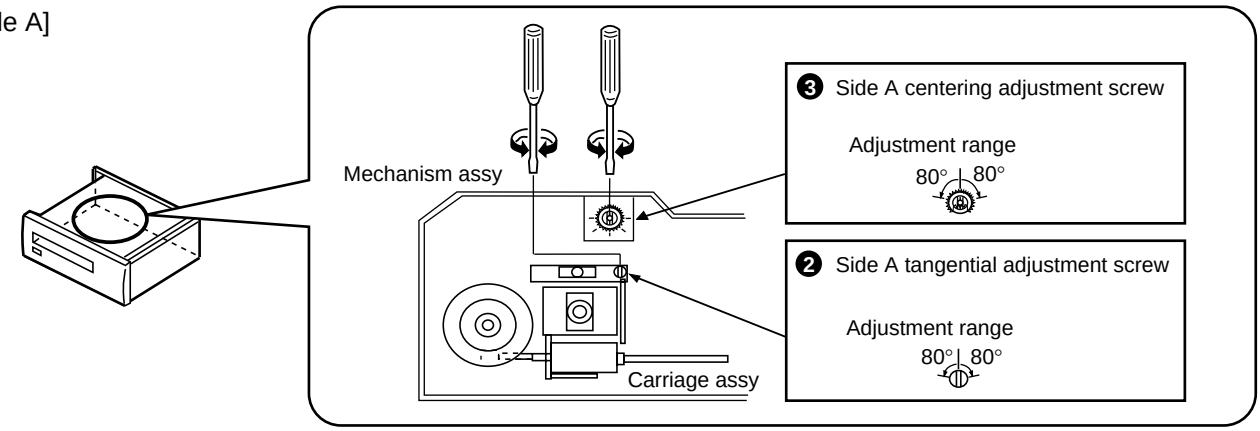


SIDE A

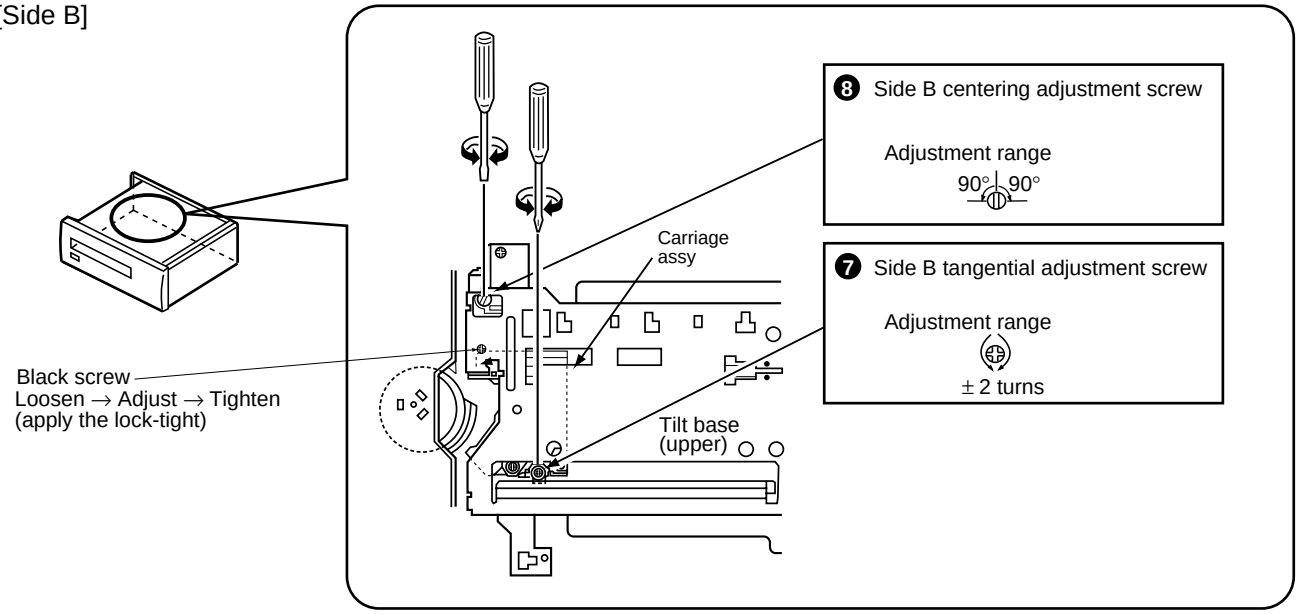
■ Adjustment Points (Mechanism Part)

CLD

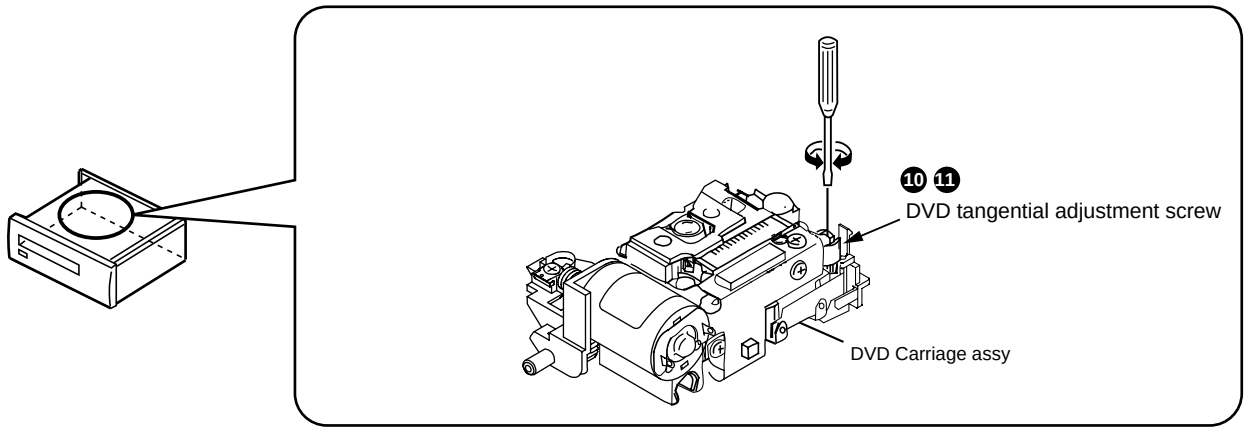
[Side A]



[Side B]

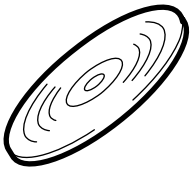
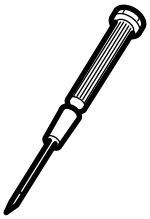
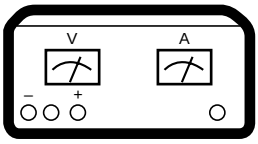
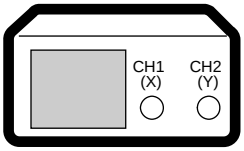
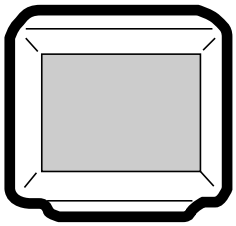
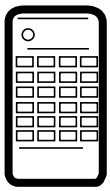
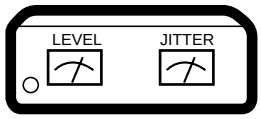
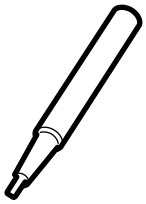


DVD



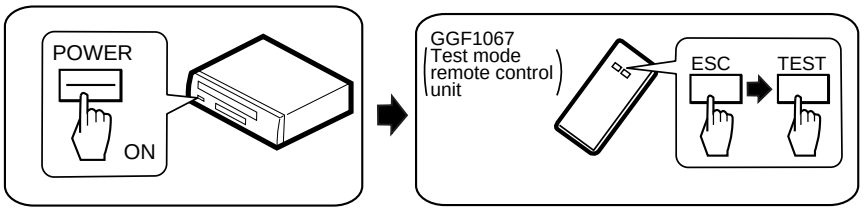
Note : Apply the lock-tight.

6.2 JIGS AND MEASURING INSTRUMENTS

 CD test disc (YEDS-7)	 LD test disc (NTSC :GGV1012) (PAL :GGV1007)	 DVD test disc (DVD-MJK1)	 ⊖ Screwdriver (medium)
 ⊖ Screwdriver (small)	 ⊕ Precise screwdriver	 ⊖ Precise screwdriver	 ⊕ Screwdriver (large)
 ⊕ Screwdriver (medium)	 V A DC power supply	 CH1 (X) CH2 (Y) Dual-trace oscilloscope (with delay) Frequency band ≧ 40MHz	 Frequency counter Display digit ≧ 8-digit
 TV monitor	 Test mode remote control unit (GGF1067)	 LEVEL JITTER Jitter meter	 Equalizer unit
 Plastic or Ceramic ⊖ Screwdriver(small)			

6.3 TEST MODE

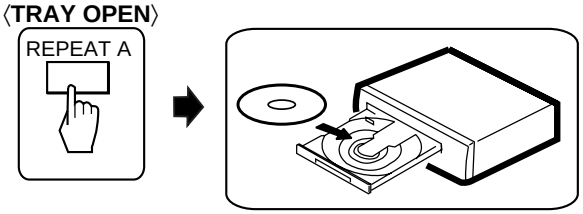
TEST MODE: ON



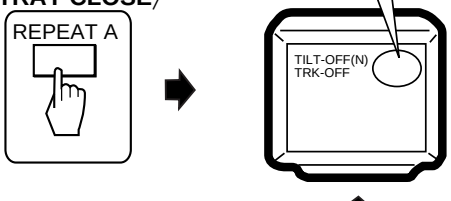
TEST MODE: DISC SET

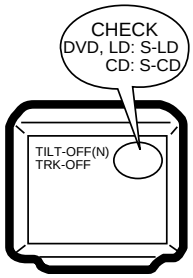
• **With TRAY**

〈**TRAY OPEN**〉

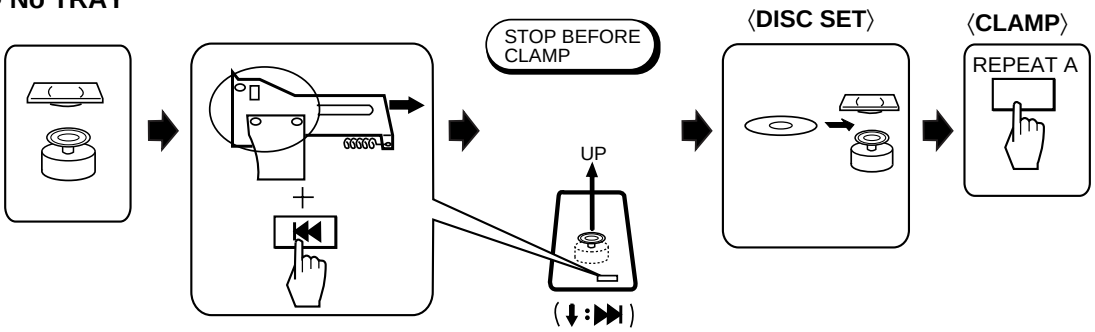


〈**TRAY CLOSE**〉



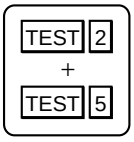


• **No TRAY**

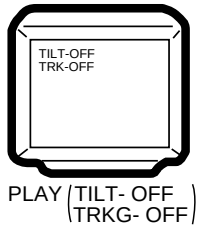


TEST MODE: PLAY

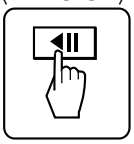
〈**TRKG OFF PLAY**〉



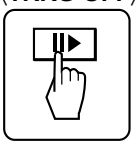
〈**TRKG ON PLAY**〉



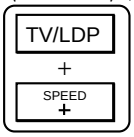
〈**TRKG ON**〉

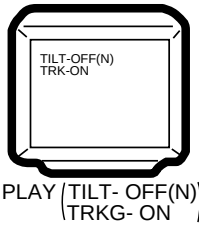


〈**TRKG OFF**〉

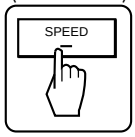


〈**TILT ON**〉

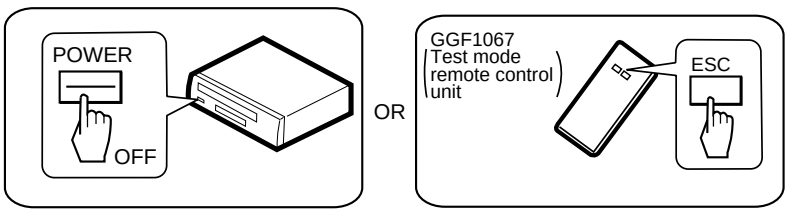




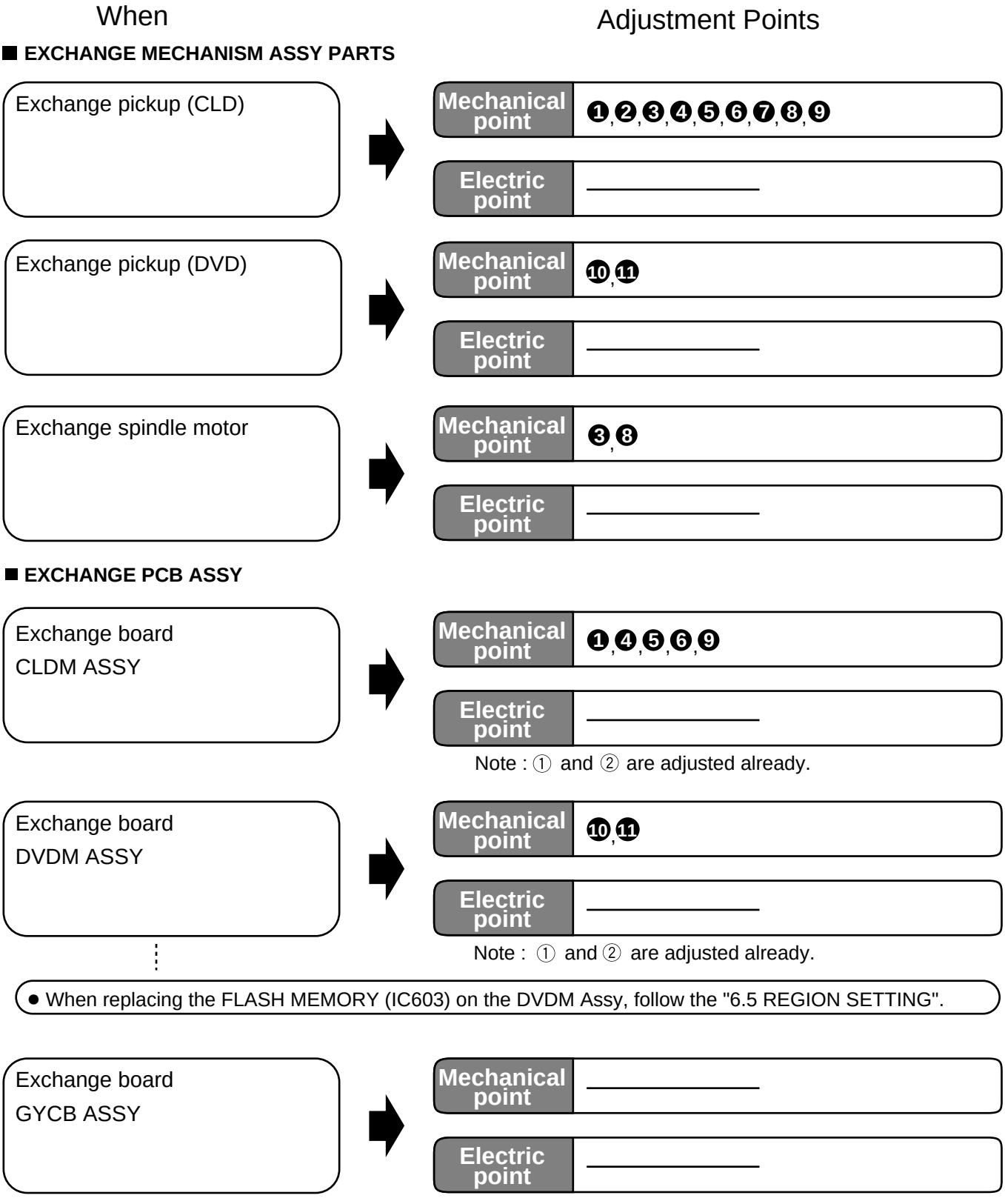
〈**TILT OFF**〉



TEST MODE: OFF

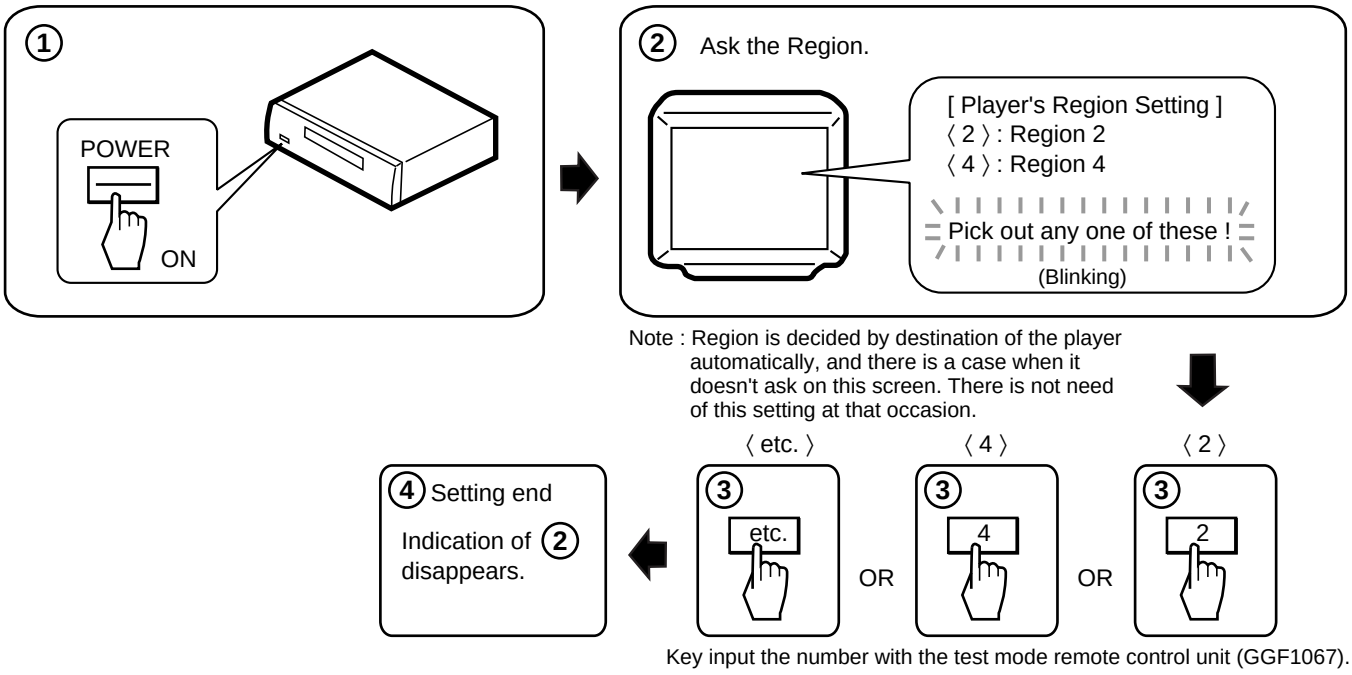


6.4 NECESSARY ADJUSTMENT POINTS



6.5 REGION SETTING

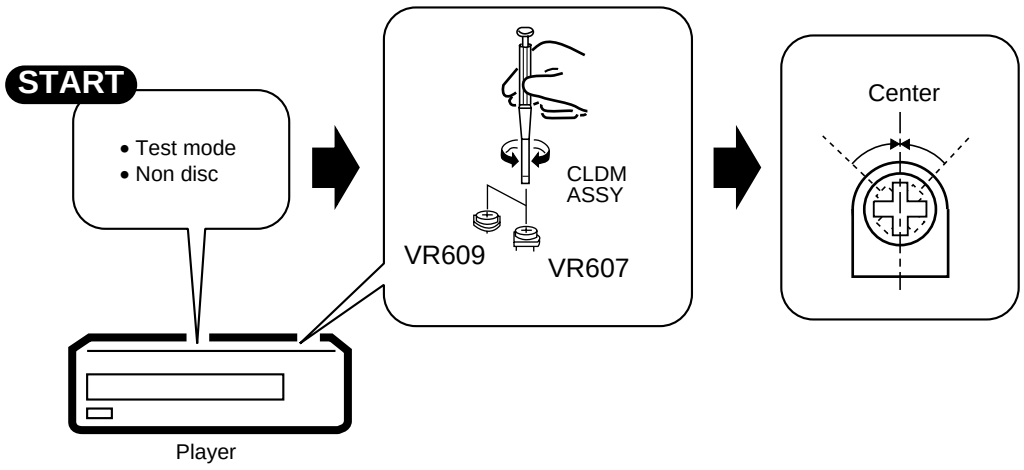
Perform this operation after confirming the region number of each destination on the cover.
Region number decided once can be changed never again.



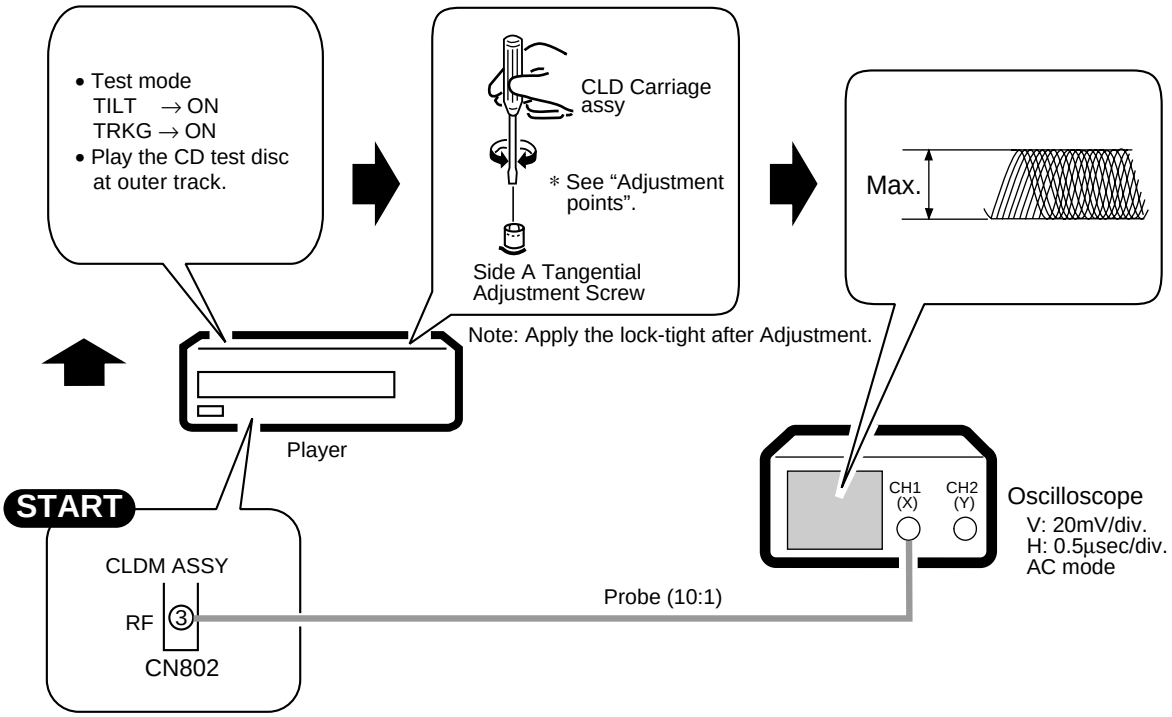
Key input the number with the test mode remote control unit (GGF1067).

6.6 MECHANICAL ADJUSTMENT

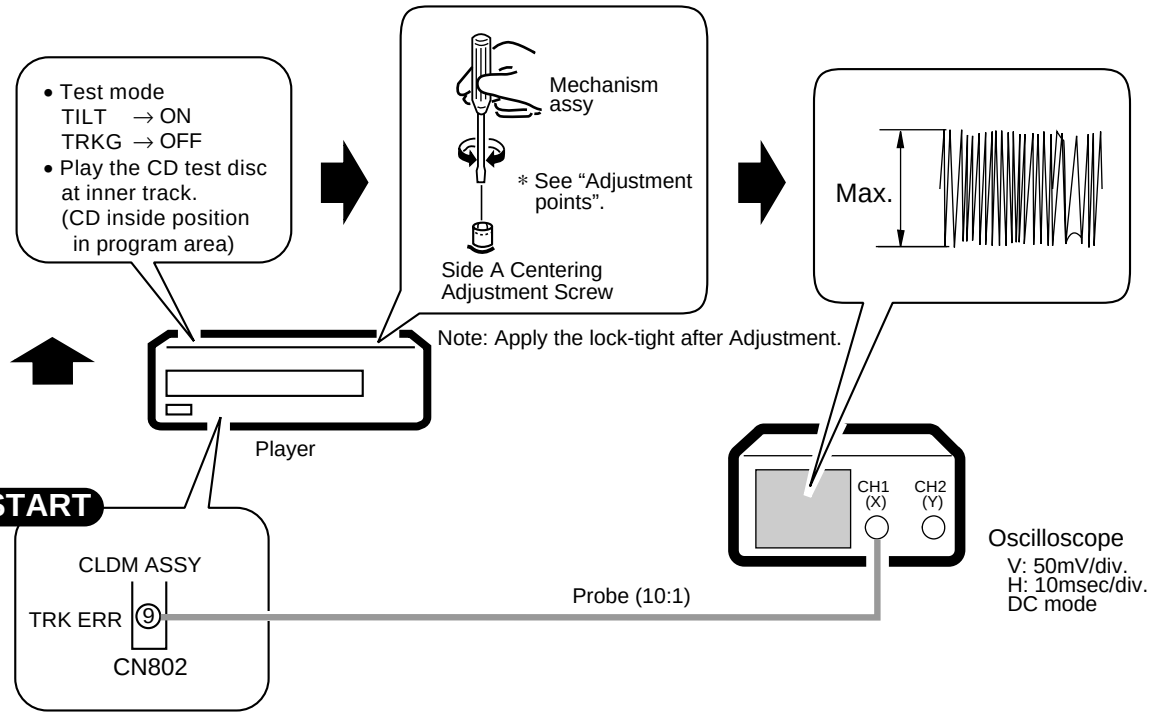
1 Tilt Offset Adjustment



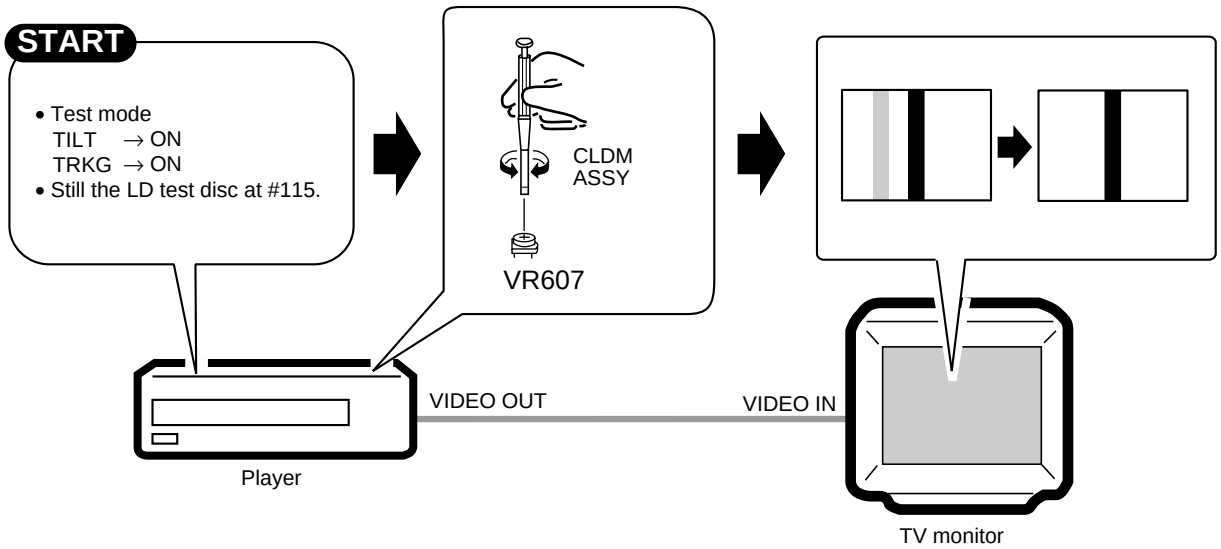
2 Tangential Direction Angle Adjustment for Side A



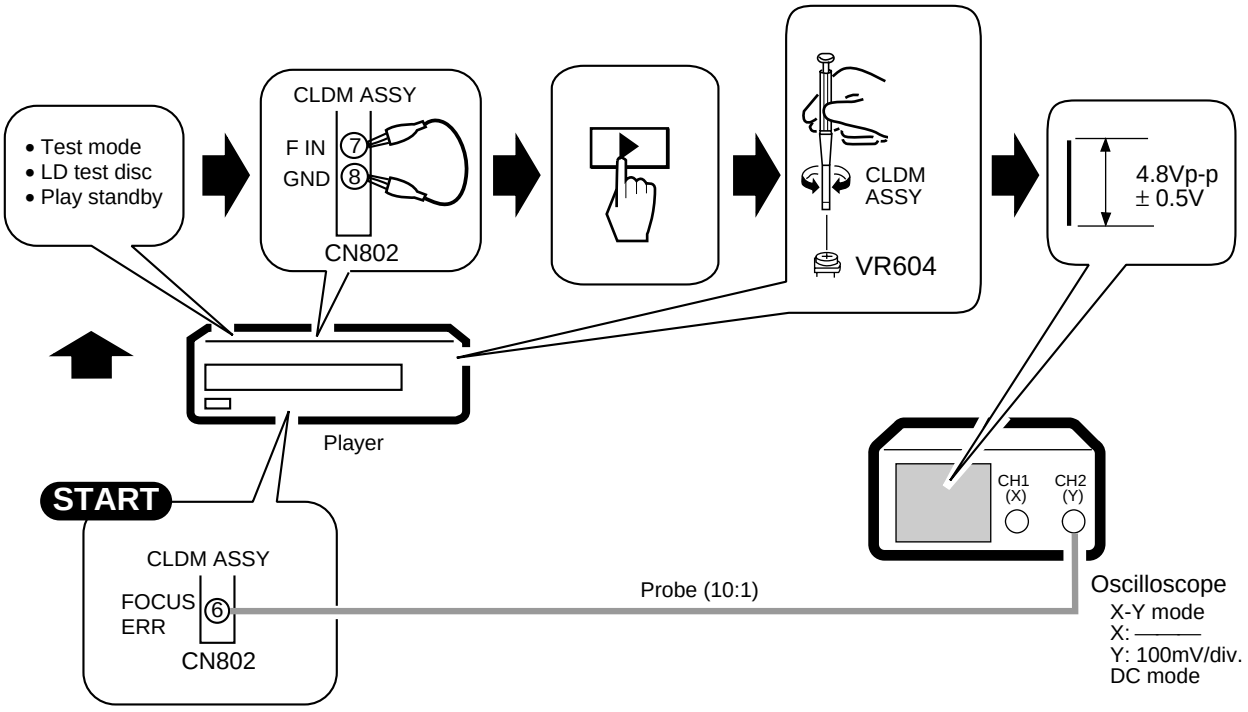
3 Spindle Motor Centering Adjustment for Side A



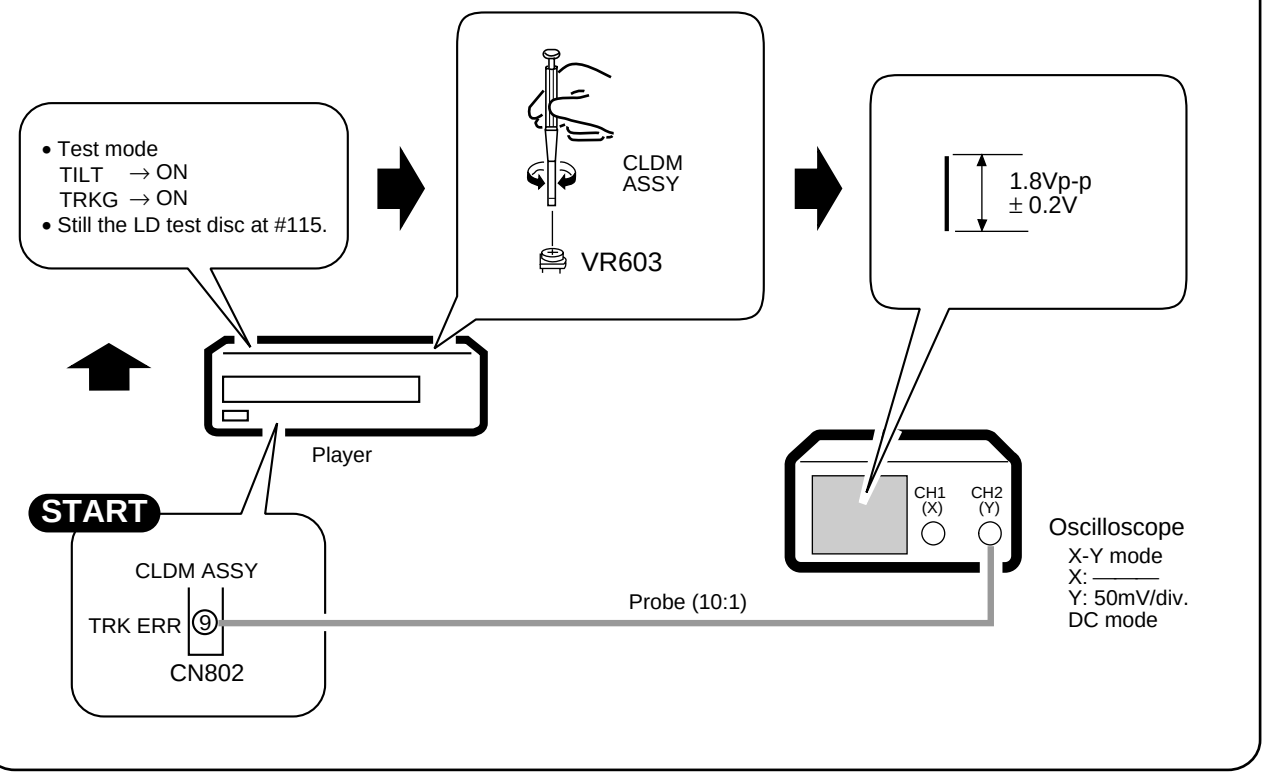
4 Crosstalk Check and Fine Tilt Offset Adjustment for Side A



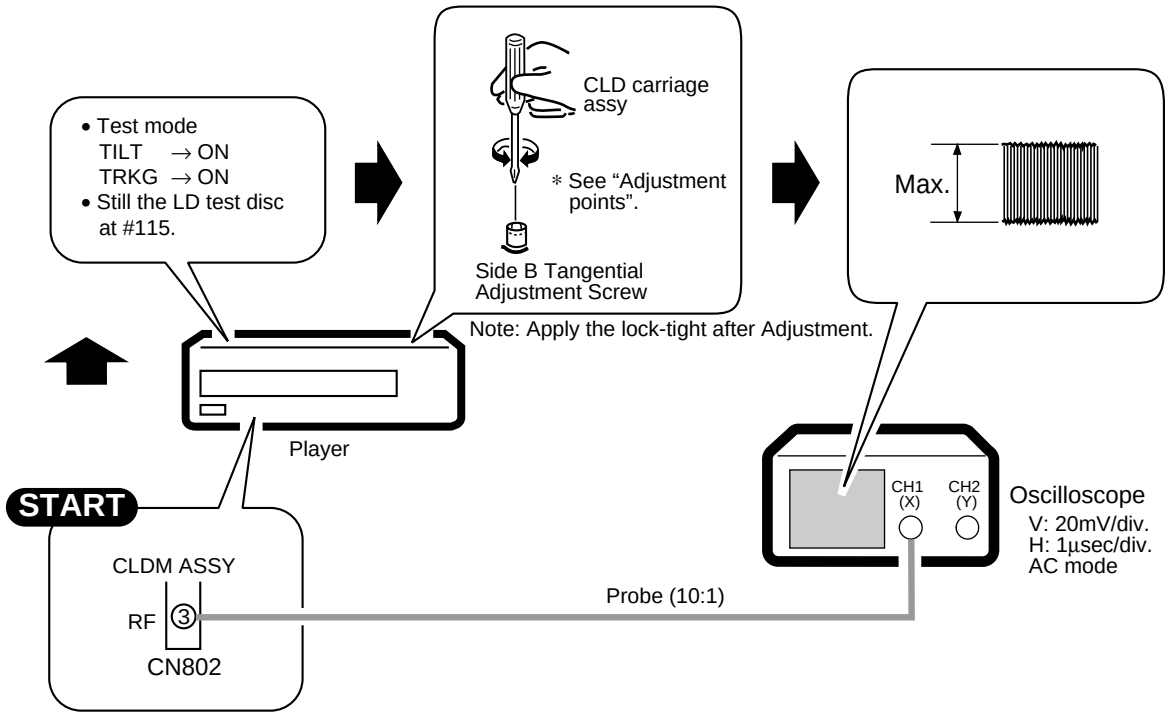
5 Focus Servo Loop Gain Adjustment



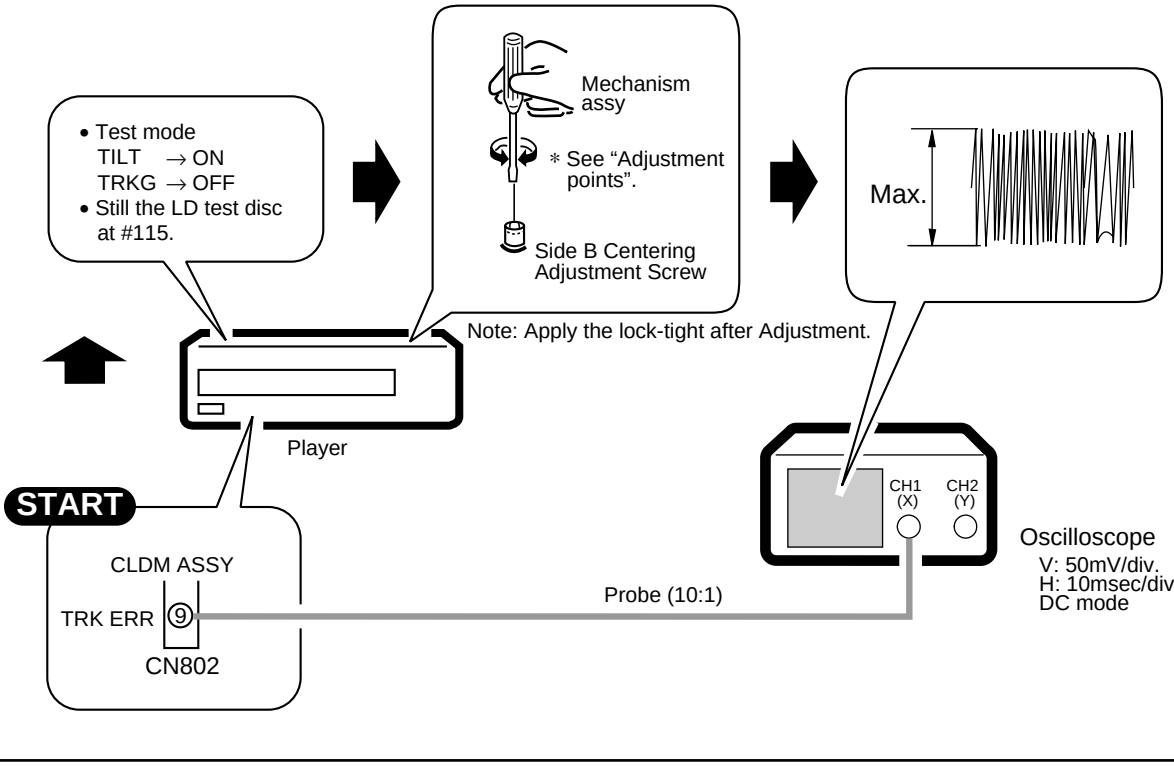
6 Tracking Servo Loop Gain Adjustment



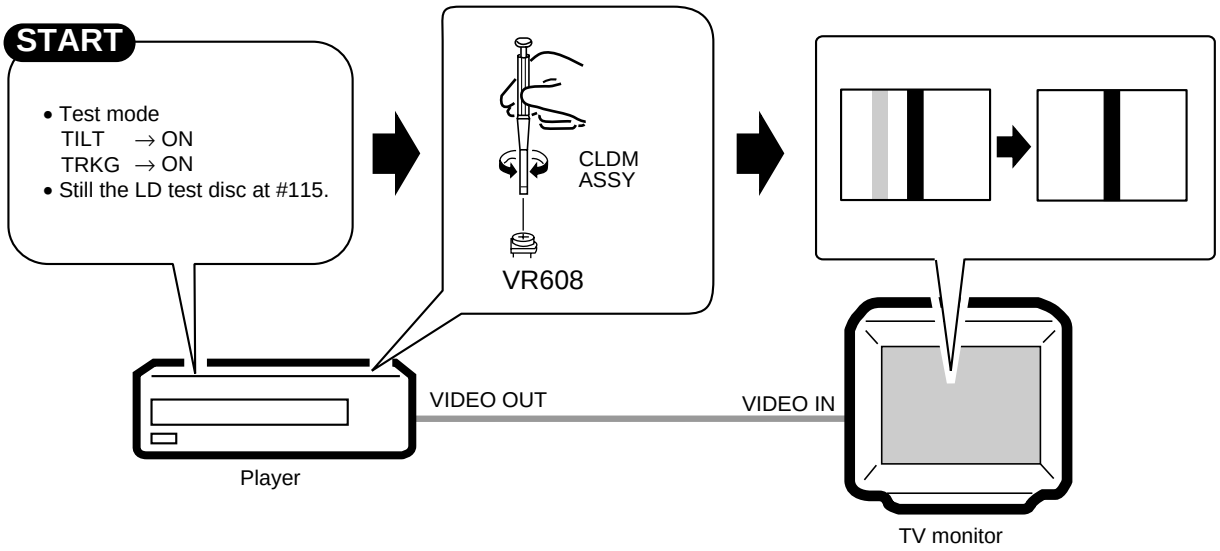
7 Tangential Direction Angle Adjustment for Side B



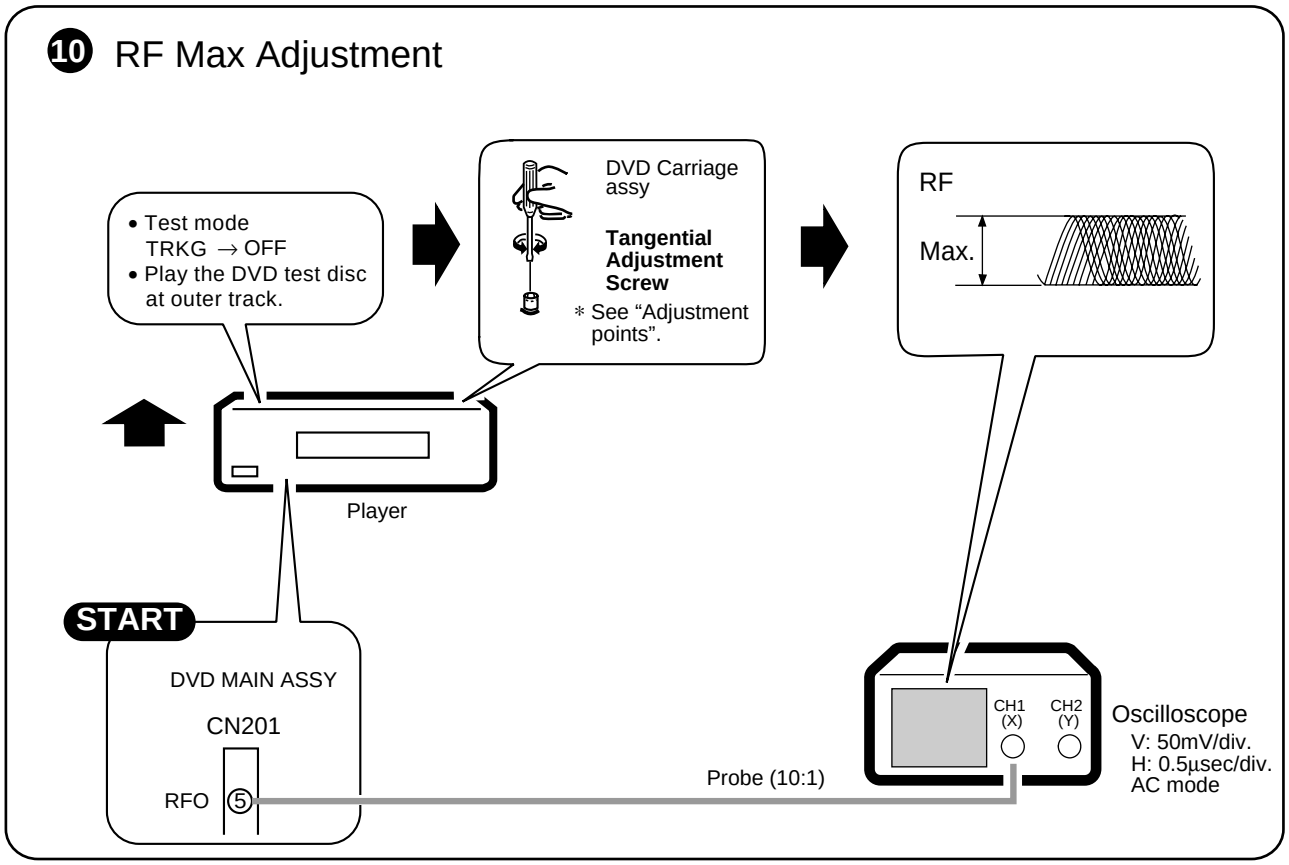
8 Spindle Motor Centering Adjustment for Side B



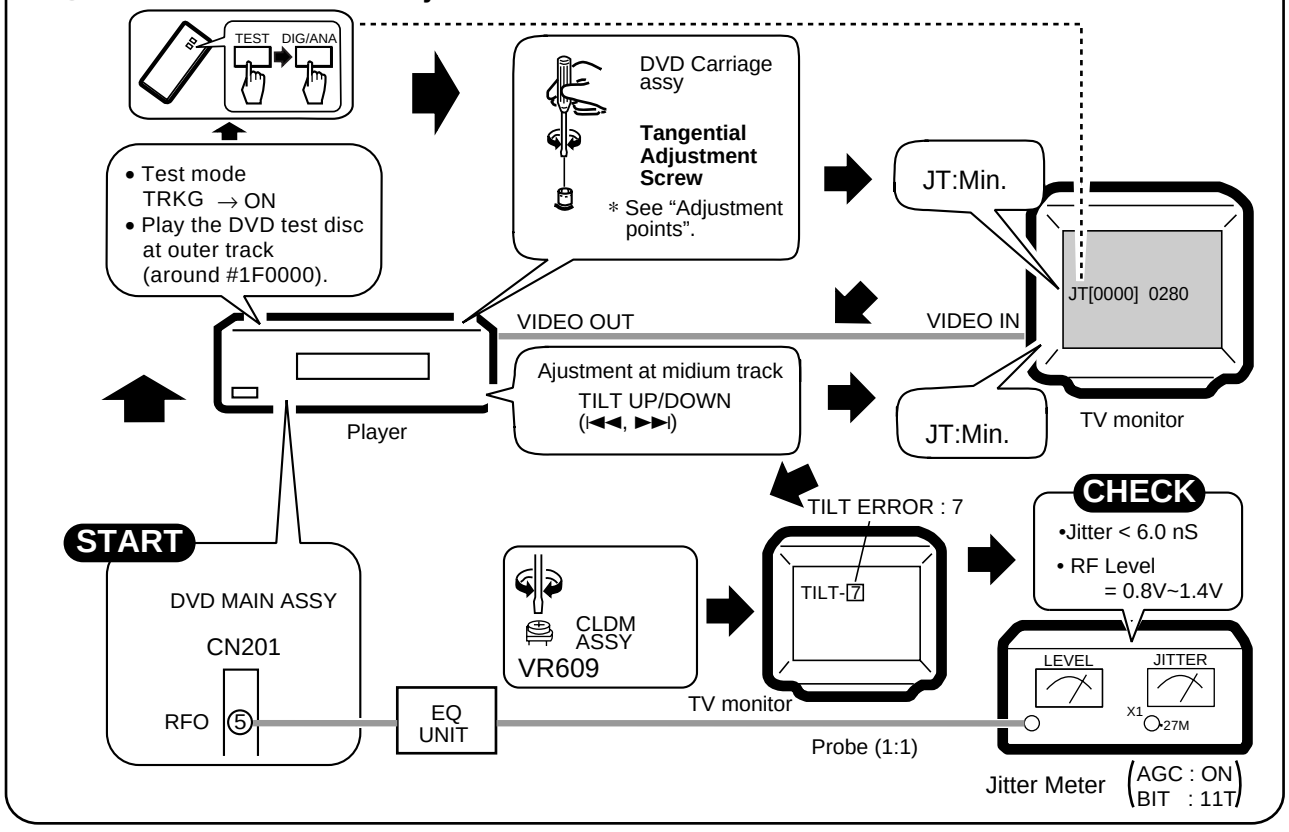
9 Crosstalk Check and Fine Tilt Offset Adjustment for Side B



10 RF Max Adjustment

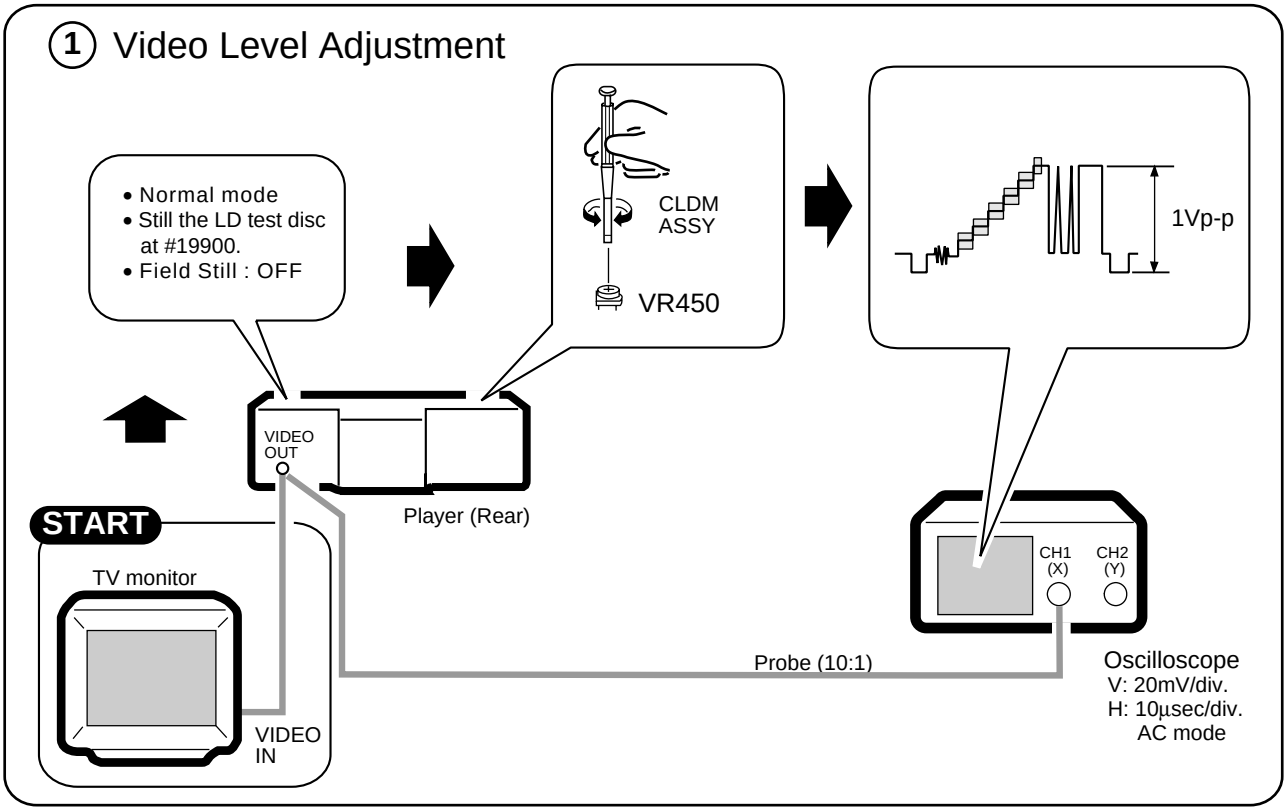


11 DVD Jitter Best Adjustment

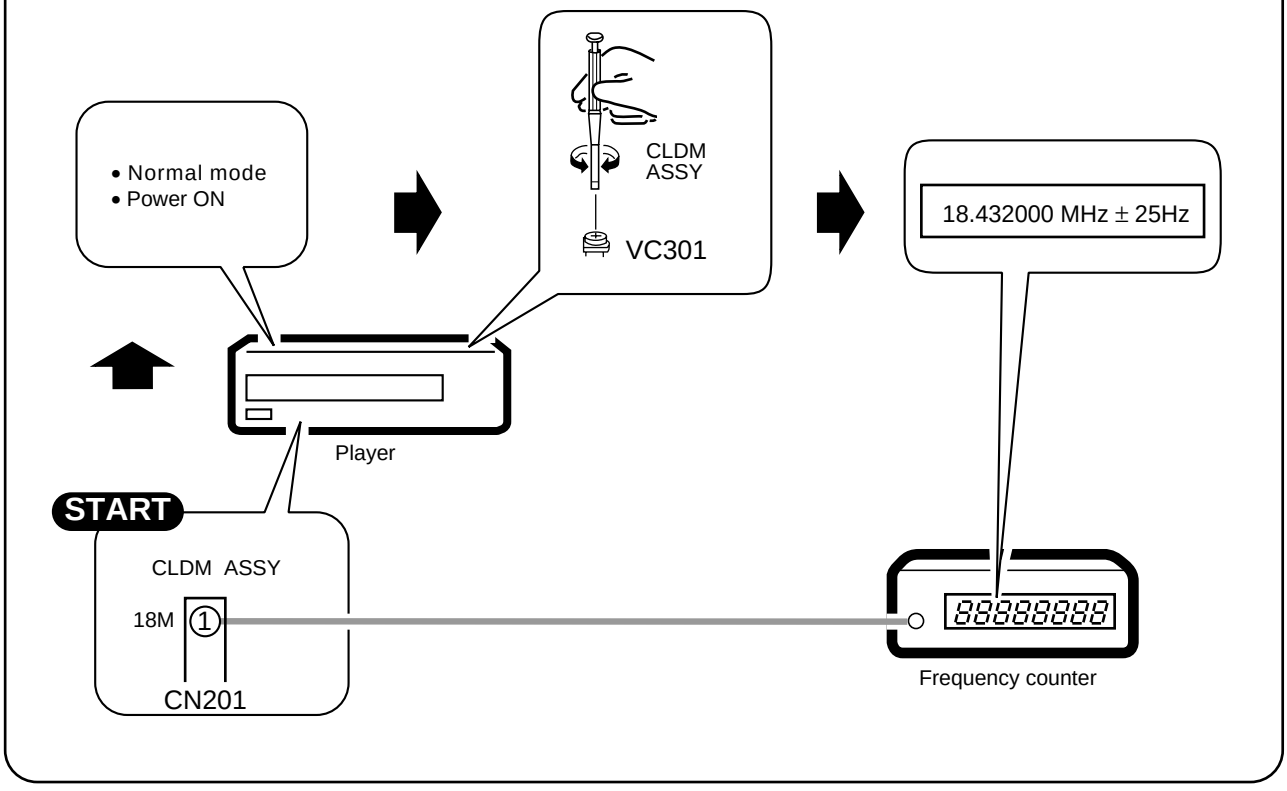


6.7 ELECTRICAL ADJUSTMENT FOR CLDM ASSY

① Video Level Adjustment

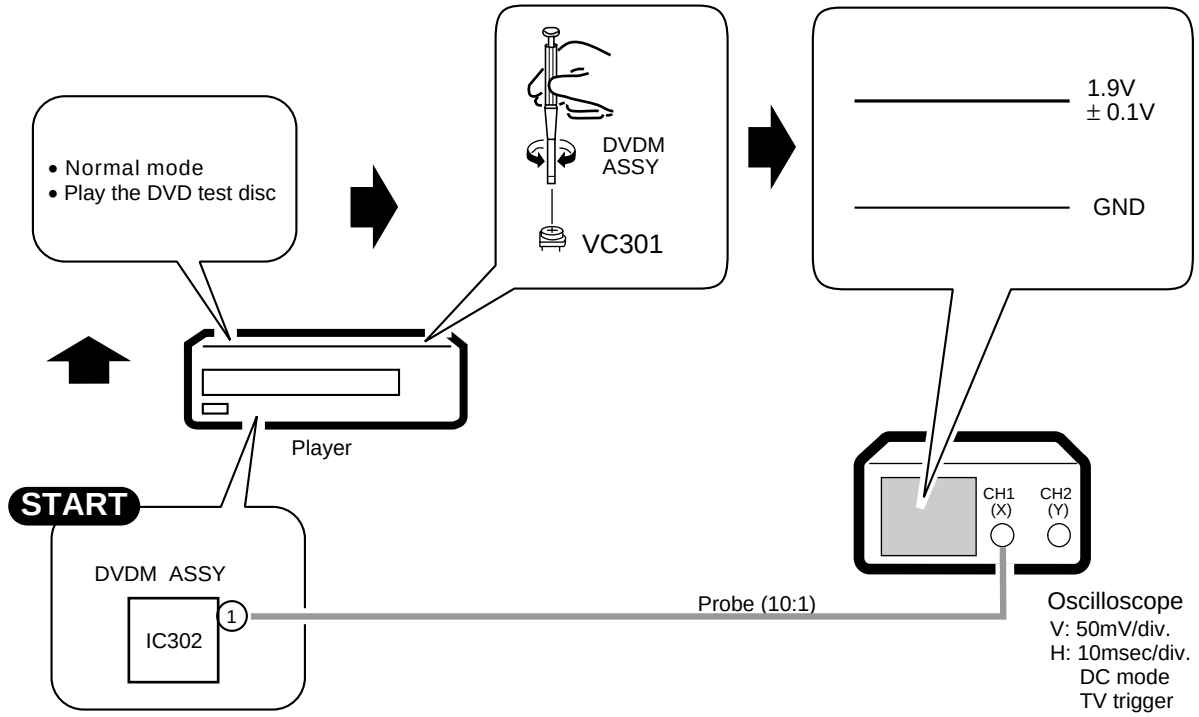


② 18MHz Master Clock Adjustment

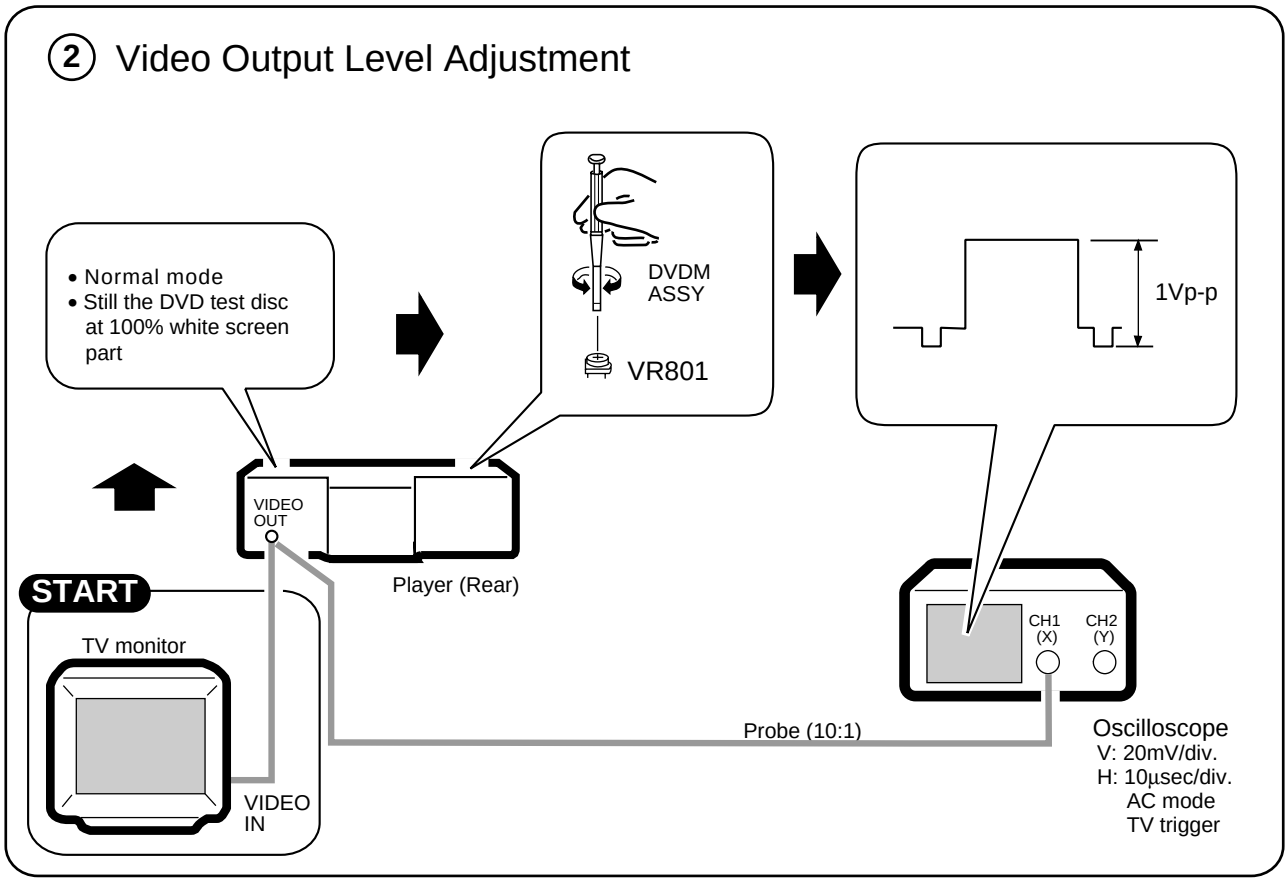


6.8 ELECTRICAL ADJUSTMENT FOR DVDM ASSY

① VCO Offset Adjustment

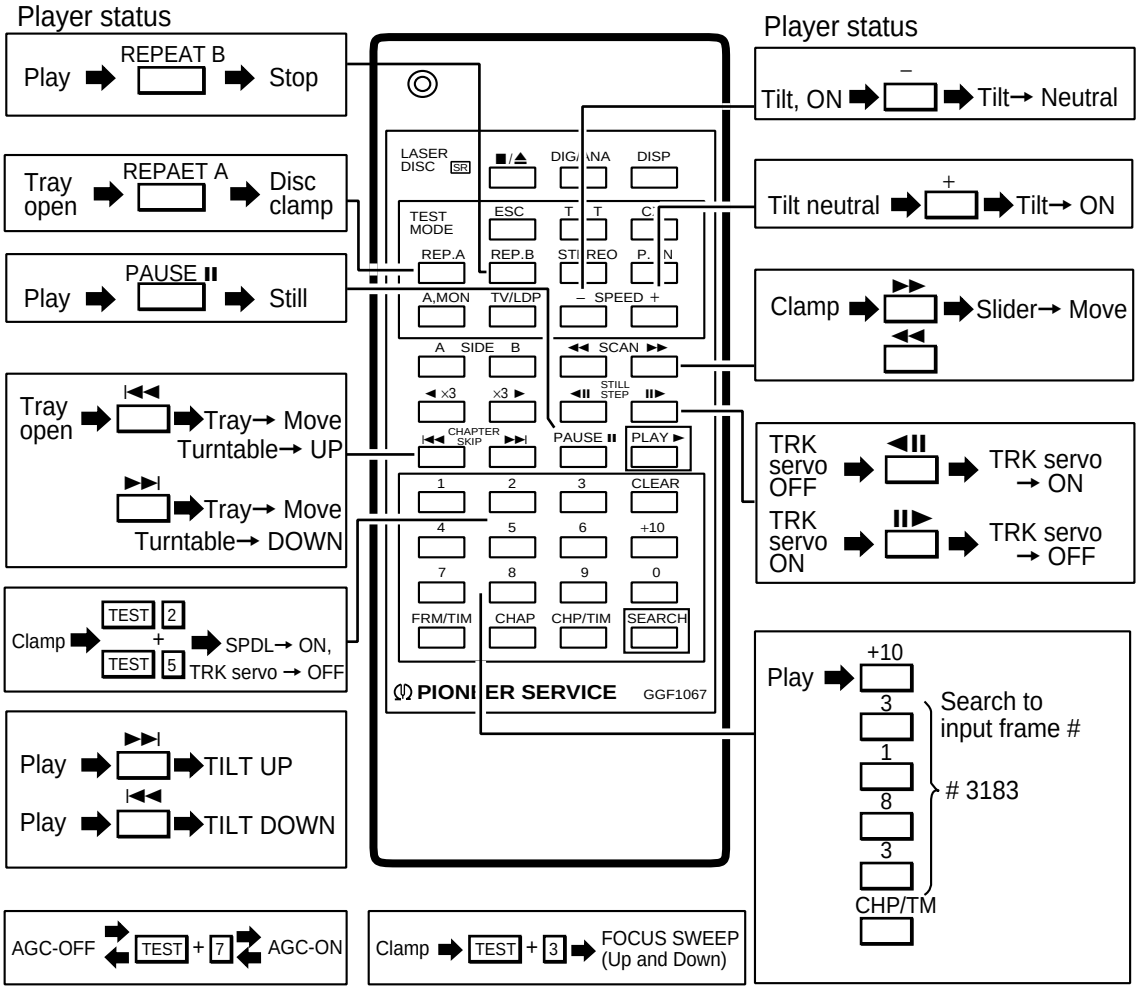


② Video Output Level Adjustment

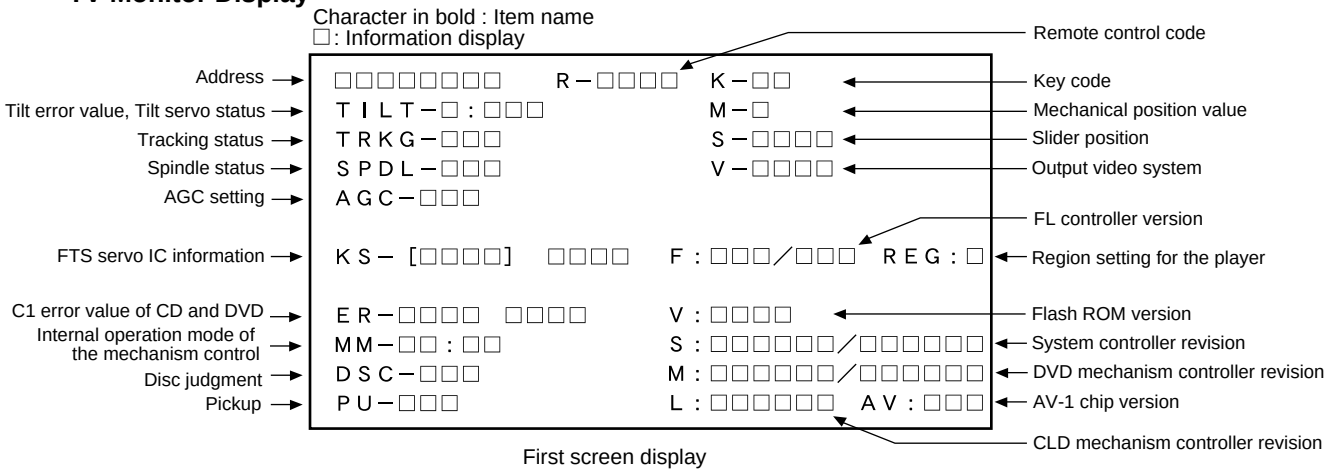


6.9 OPERATIONS IN THE TEST MODE

■ Test Mode Remote Control Unit (GGF1067)

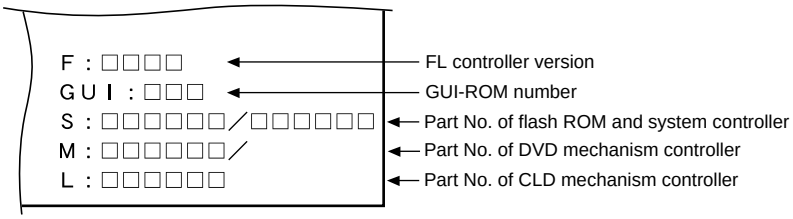


■ TV Monitor Display


Character in bold : Item name
□: Information display
Remote control code
Address → □□□□□□□□ R–□□□□ K–□□ ← Key code
Tilt error value, Tilt servo status → TILT–□:□□□ M–□ ← Mechanical position value
Tracking status → TRKG–□□□ S–□□□□ ← Slider position
Spindle status → SPDL–□□□ V–□□□□ ← Output video system
AGC setting → AGC–□□□
FL controller version
FTS servo IC information → KS– [□□□□] □□□□ F:□□□/□□□ REG:□ ← Region setting for the player
C1 error value of CD and DVD → ER–□□□□ □□□□ V:□□□□ ← Flash ROM version
Internal operation mode of the mechanism control → MM–□□:□□ S:□□□□□□/□□□□□□ ← System controller revision
Disc judgment → DSC–□□□ M:□□□□□□/□□□□□□ ← DVD mechanism controller revision
Pickup → PU–□□□ L:□□□□□□ AV:□□□ ← AV-1 chip version
CLD mechanism controller revision

First screen display

Note : Switch the first and second screen by pressing the [DISPLAY] key on the remote control unit.


F:□□□□ ← FL controller version
GUI:□□□ ← GUI-ROM number
S:□□□□□□/□□□□□□ ← Part No. of flash ROM and system controller
M:□□□□□□/ ← Part No. of DVD mechanism controller
L:□□□□□□ ← Part No. of CLD mechanism controller

Second screen display (at lower right portion of the screen)

7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ PD0266A2 (CLDM ASSY : IC101)

• Mechanism Control IC

● Pin Function

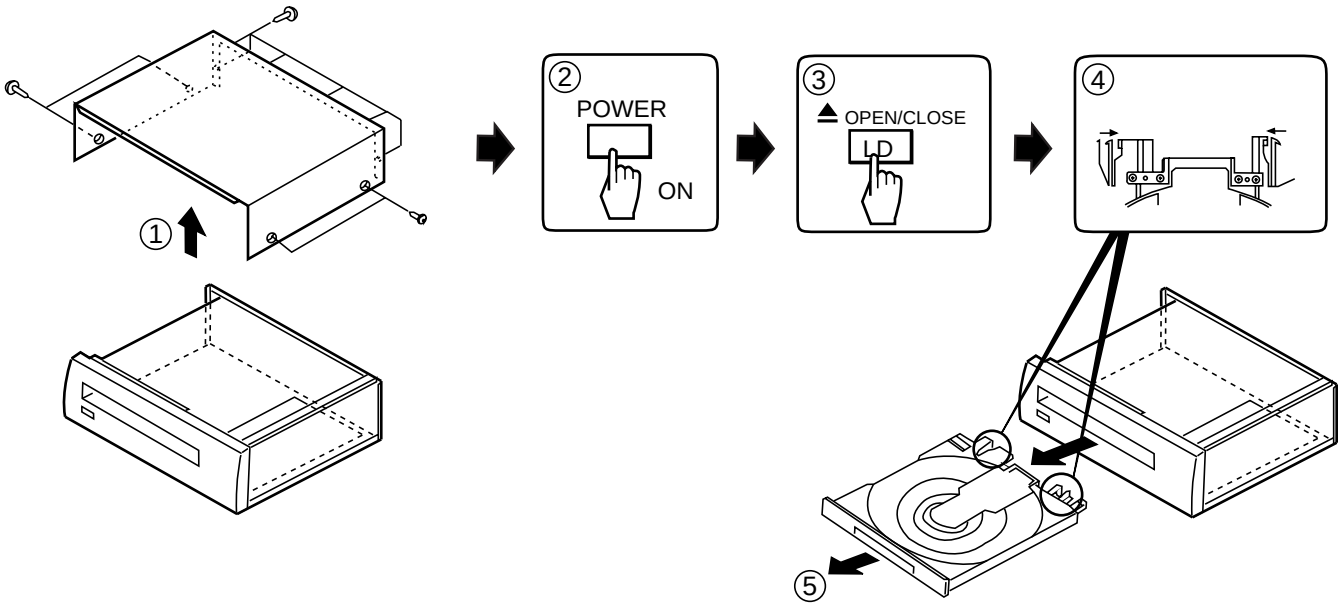
No.	Pin Name	I/O	Function
1	VCC	I	Power supply pin Apply 5V ± 10%
2	RWC	O	DSP read/write command signal output "L"= Read "H"= Write
3	XPLAY	O	Signal output during spindle servo "L"= SC PLAY "H"= Others
4	XCQCK	O	DVP/DSP clock switch "L"= DSP "H"= Others
5	XCD	O	LD/CD switch signal output "L= CD "H"= LD
6	TILT ERR	I	A/D • This signal is A/D converted as the tilt servo control input. Control the tilt motor so that this signal becomes 2.5V.
7	TRK BAL ERR	I	A/D • Tracking balance error signal input This signal is A/D converted as the tracking offset control input.
8	SLD ERR	I	A/D • This signal is A/D converted as the slider servo control input. Control the slider motor so that this signal becomes 2.5V.
9	SLD POS	I	A/D • Pickup position detection switch input Detect the position by reading A/D input value which each switches are resistance divided.
10	FSEQ	I	Subcode sync. confirmity detection signal input "L"= Not confirmity "H"= Confirmity
11	XC DETECT	I	Spindle over-current detection signal input "L" = Over current "H"= Normal
12	TRK BAL DRV	O	PWM • Output the tracking offset signal to PWM output, then use for auto tracking offset. 910 µsec period, tri-state control H, L, Z
13	SHAKE	I/O	Handshake signal for data communication with the DVD mechanism control IC This pin is the bilateral data line and each microprocessor control the Input/Output.
14	RF CORRECTION	O	RF correction switch signal output "H"= Gain UP CD, CDV-A:Low, CAV inner circuit gain up, others are High.
15	SQOUT	I	Command data input from DSP Read out SUBQ
16	COIN	O	Serial 3 data output
17	SCK3/CQCK	O	Serial 3 clock output
18	SLD DRV	O	PWM • Slider control signal output 5V= FWD, 0V= REV, 2.5V= STOP 910 µsec period, tri-state control
19	SI1	I	Serial data input from the DVD mechanism control IC
20	SO1	O	Serial data output to the DVD mechanism control IC
21	SCK1	I/O	Clock for serial communication with the DVD mechanism control IC Becomes input mode without communicate with the DVD mechanism control IC
22	TRK 0 CRS	I	INT • Tracking error zero cross signal input Monitor this signal when searching track count in the miss clamp detection
23	SBSY	I	Subcode block sync. input
24	TILT OUT	I/O	LOAD/TILT control output PWM output 0V : Tray IN / Tilt DOWN, 5V : Tray OUT / Tilt UP, 2.5V : STOP
25	TURN OUT	O	Turn drive signal output
26	XPBV	I	Playback vertical sync. signal input of LD/CDV "L"= During vertical sync.
27	CNVSS	I	Ground for A/D conversion
28	XRESET	I	Reset signal input "L"= Reset "H"= Release reset
29	XIN	I	9MHz clock oscillation input
30	XOUT	O	9MHz clock oscillation output

No.	Pin Name	I/O	Function
31	N.C.	O	Not used
32	GND	I	Ground
33	MSW1	I	Switch input for Loading/Tilt position detection
34	MSW3		
35	MSW2		
36	TBCLOCK	I	Spindle lock signal input "L"= Unlock "H"= Lock
37	FG	I	Spindle motor FG signal input
38	DATA	I	Input for Phillips code decoder with built-in mechanism controller
39	XPBH	I	Playback H-SYNC input for Phillips code decoder
40	XPBV	I	Playback V-SYNC input for Phillips code decoder
41	DEXT	O	Control signal output of video dynamic range extension "H"= ON "L"= OFF
42	WFM	I	WFM : with memory
43	LATMEM	O	Serial control latch output of memory control IC PD3212A Latches at falling edge.
44	YCACK	O	3 line digital comb IC PD6148 ACK input
45	XYCINH	O	3 line digital comb IC PD6148 Communication data switch output
46	XANRH	O	Analog NR level "L"= low "H"= high
47	THOLD	I	Track jump accelerating / decelerating signal input "L"= Others "H"= During accelerating / decelerating
48	LATDVP	O	PD0234 serial latch signal output Latches at falling edge.
49	SELTZC	O	TZC switch signal output "H"= at normal "L"= at CD/DVD disc discrimination
50	DOCINH	O	Control the clamp pulse and clamp killer circuit by tri-state value
51	XANRON	O	Control signal output of analog NR "L"= ON "H"= OFF
52	NROFF	O	Noise reduction control output by VDEM "L"= Normal "H"= Not NR
53	DSCEXST	I	Disc present/absent detecting signal input by the tilt sum in the DVD P.U. mode "H"= Absent "L"= Present DEFECT input at LD P.U.
54	XTURNB	I	Turn switch input "H"= Side A / turn "L"= Side B
55	XTURNA	I	Turn switch input "H"= Side B / turn "L"= Side A
56	XLPO	I	LD P.U. out position detecting switch input "H"= LD P.U. active "L"= LD P.U. out position
57	VDET	I	Use for power abnormal signal input port "L"= Normal "H"= Abnormal
58	XFOK	I	Focus servo lock signal input "L"= Lock "H"= Unlock Use for lock detection of focus servo
59	WRQ	I	Subcode Q reading OK signal input "L"= NG "H"= OK This pin will be H when subcode Q data passed by CRC check.
60	AC3MUTE	O	Mute control signal output for AC3 Release MUTE during playback. "L"= Release MUTE "H"= MUTE
61	SQ1	O	Analog audio switching signal output 1/L "L"= Squelch OFF "H"= Squelch ON
62	SQ2	O	Analog audio switching signal output 2/R "L"= Squelch OFF "H"= Squelch ON
63	XCX	O	Analog audio CX noise reduction switching signal output "L"= CX ON "H"= CX OFF
64	XANA	O	Digital / Analog audio switching signal output "L"= Analog "H"= Digital

7.2 DISASSEMBLY/ASSEMBLY

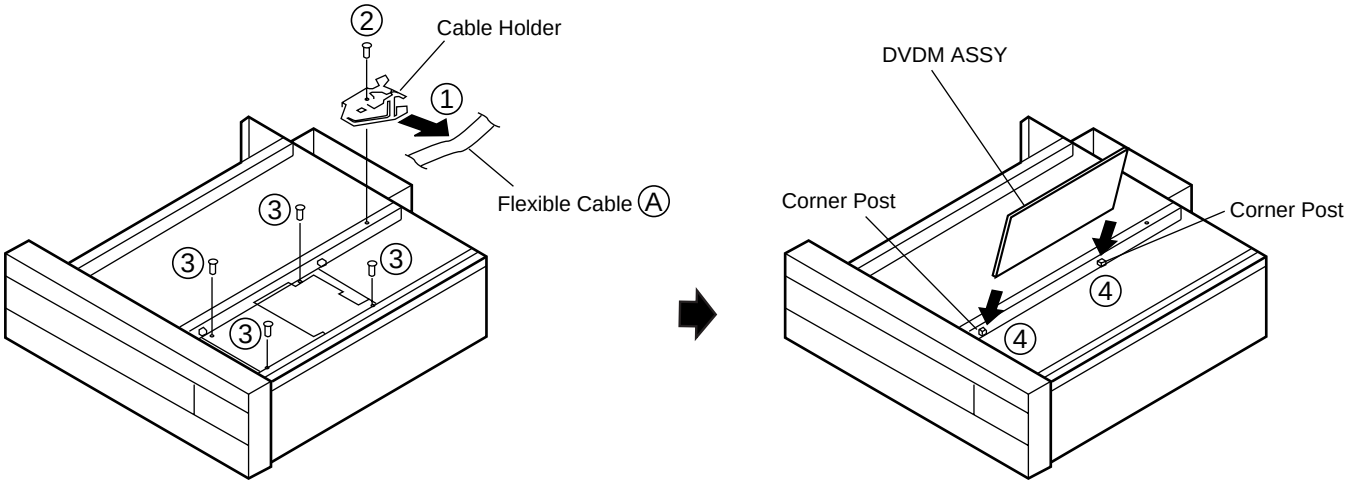
(1) DISC TRAY

- Disassembly : ①→②→③→④→⑤
- Assembly : ⑤→①



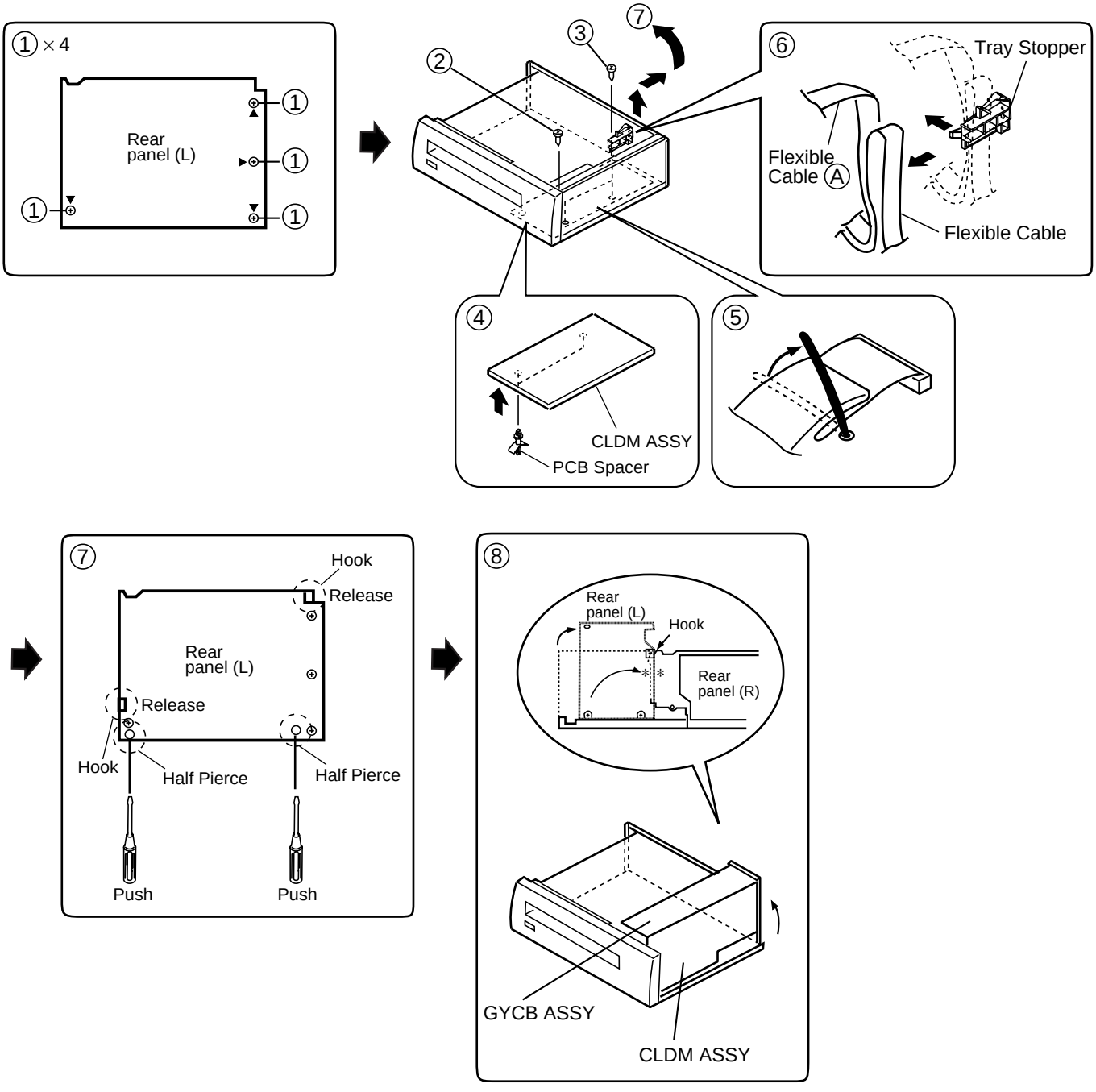
(2) DVDM ASSY

- Disassembly : ①→②→③→④
- Assembly : ④→③→②→①

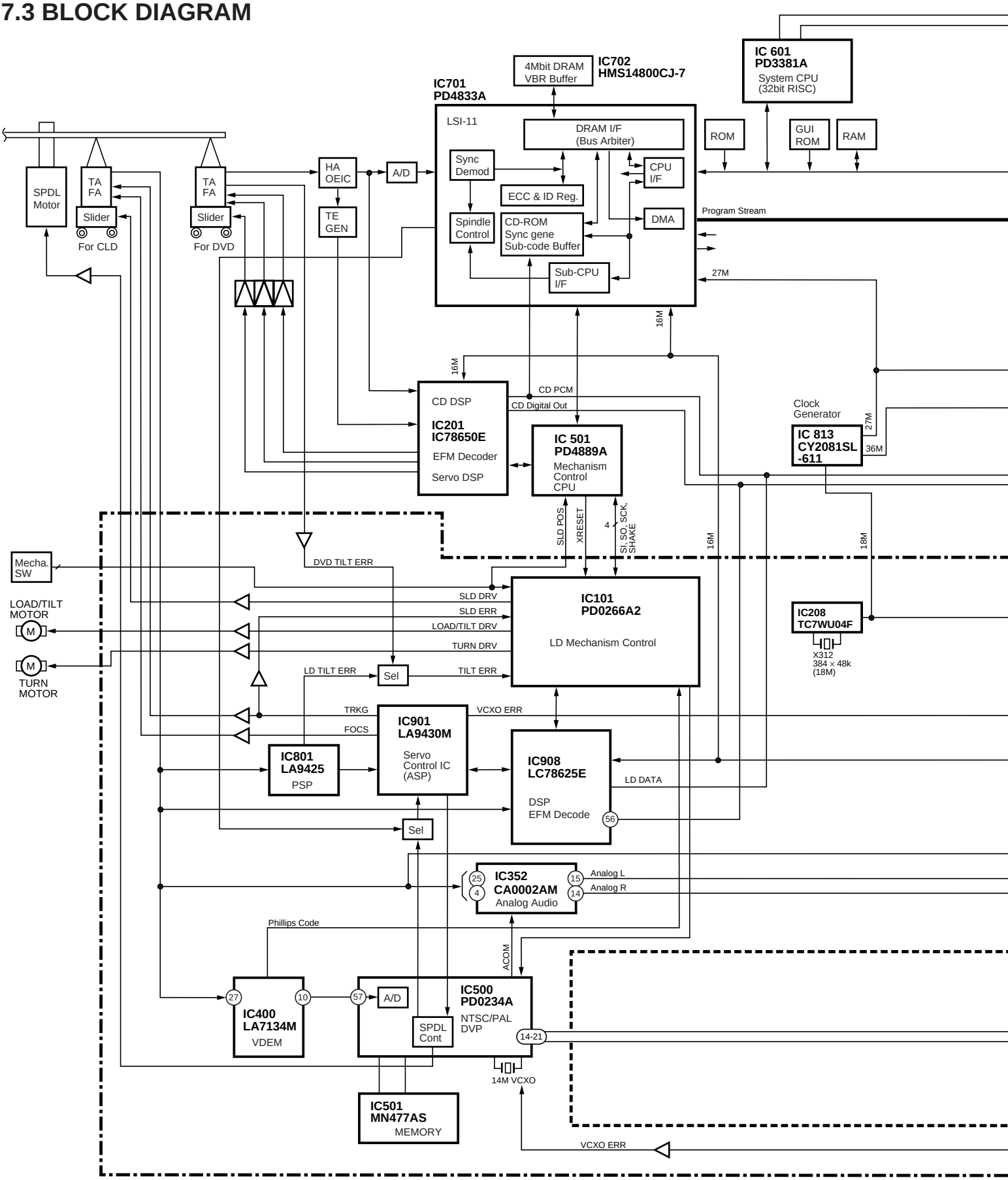


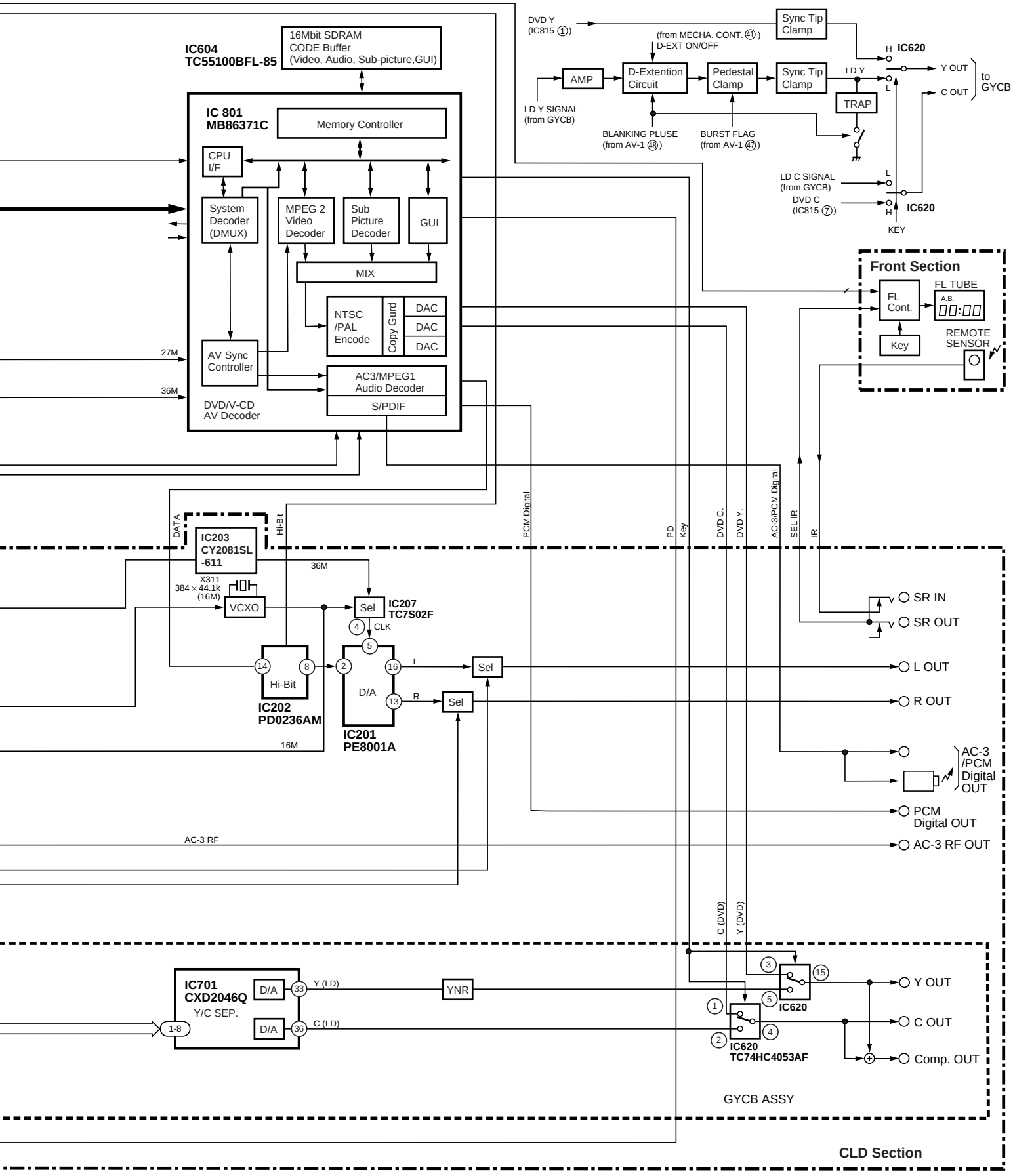
(3) CLDM ASSY

- Disassembly : ①→②→③→④→⑤→⑥→⑦→⑧
- Assembly : ⑧→⑦→⑥→⑤→④→③→②→①



7.3 BLOCK DIAGRAM

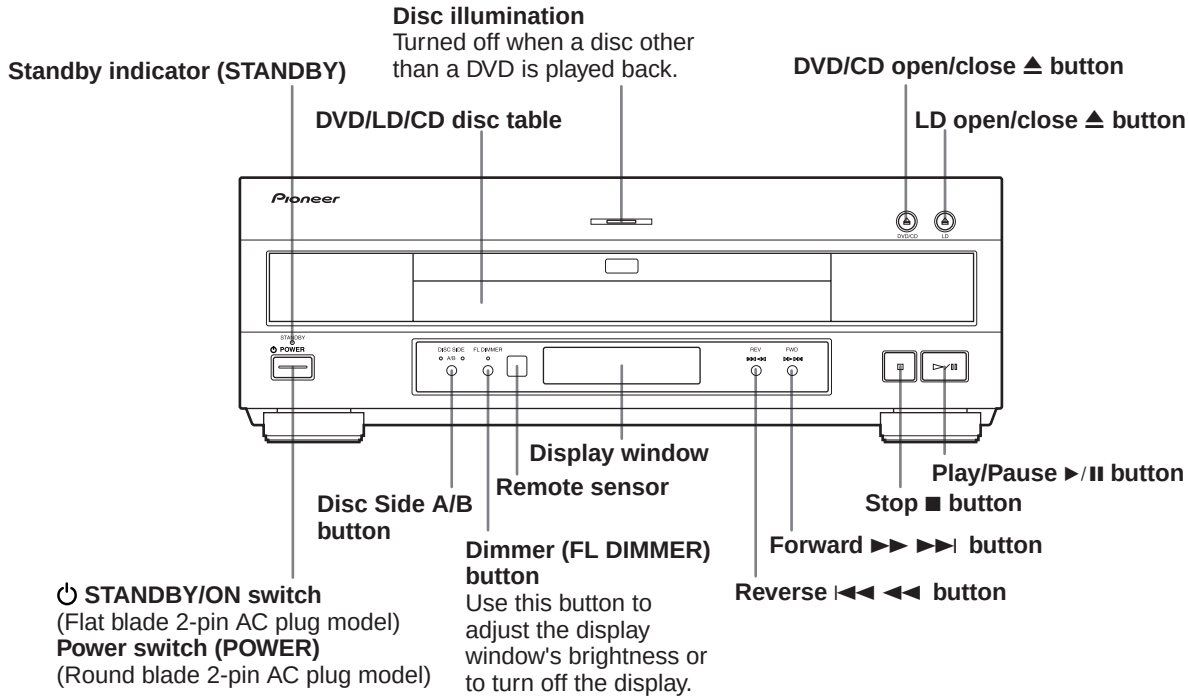



IC604
TC55100BFL-85
16Mbit SDRAM
CODE Buffer
(Video, Audio, Sub-picture,GUI)
IC 801
MB86371C
Memory Controller
CPU
I/F
System
Decoder
(DMUX)
MPEG 2
Video
Decoder
Sub
Picture
Decoder
GUI
MIX
NTSC
/PAL
Encode
Copy Gurd
DAC
DAC
DAC
AV Sync
Controller
AC3/MPEG1
Audio Decoder
S/PDIF
DVD/V-CD
AV Decoder
27M
36M
DVD Y
(IC815 ①)
Sync Tip
Clamp
(from MECHA. CONT. ㊶)
D-EXT ON/OFF
H
IC620
AMP
D-Extention
Circuit
Pedestal
Clamp
Sync Tip
Clamp
LD Y
Y OUT
to
GYCB
L
C OUT
TRAP
LD Y SIGNAL
(from GYCB)
BLANKING PLUSE
(from AV-1 ㊽)
BURST FLAG
(from AV-1 ㊼)
LD C SIGNAL
(from GYCB)
DVD C
(IC815 ⑦)
IC620
KEY
Front Section
FL
Cont.
FL TUBE
A.B.
Key
REMOTE
SENSOR
DATA
IC203
CY2081SL
-611
Hi-Bit
PCM Digital
PD
Key
DVD C.
DVD Y.
AC-3/PCM Digital
SEL IR
IR
36M
X311
384 × 44.1k
(16M)
VCXO
Sel
IC207
TC7S02F
CLK
SR IN
SR OUT
Hi-Bit
IC202
PD0236AM
D/A
IC201
PE8001A
L
R
Sel
L OUT
R OUT
16M
AC-3
/PCM
Digital
OUT
PCM
Digital OUT
AC-3 RF
AC-3 RF OUT
C (DVD)
Y (DVD)
IC701
CXD2046Q
Y/C SEP.
D/A
Y (LD)
C (LD)
1-8
YNR
IC620
IC620
TC74HC4053AF
Y OUT
C OUT
Comp. OUT
GYCB ASSY
CLD Section

8. PANEL FACILITIES AND SPECIFICATIONS

■ FRONT PANEL

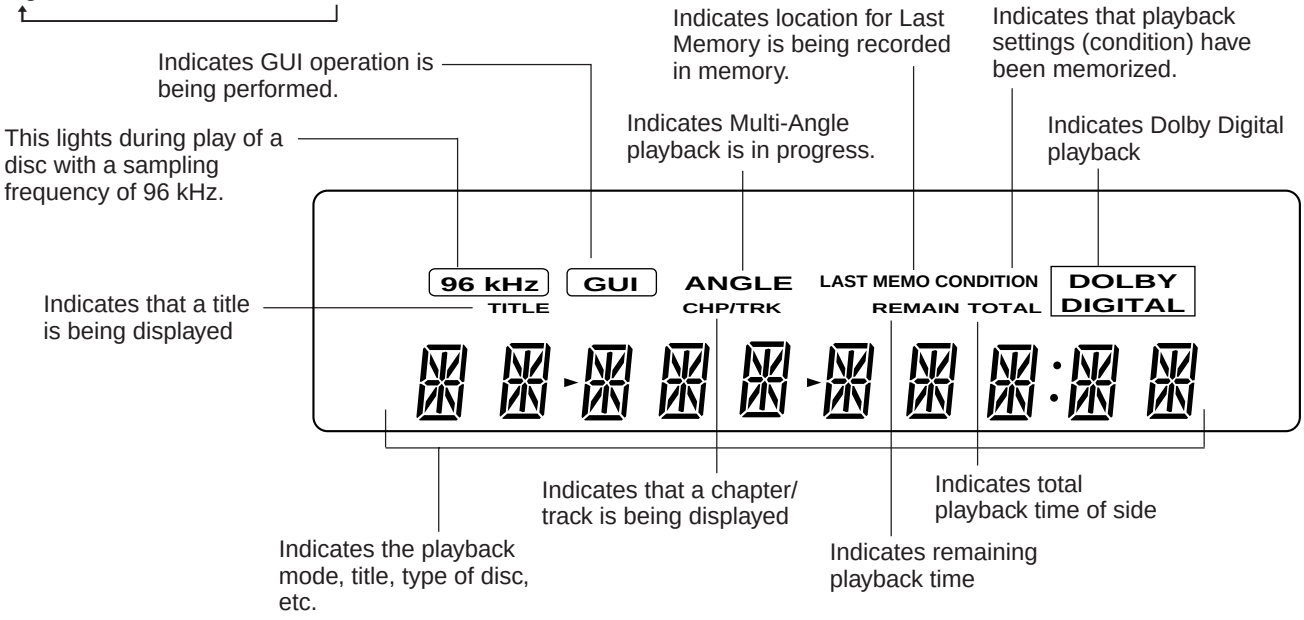
The followiing illustration shows the Flat blade 2-pin AC plug model.


Disc illumination
Turned off when a disc other than a DVD is played back.
Standby indicator (STANDBY)
DVD/CD open/close ⏏ button
DVD/LD/CD disc table
LD open/close ⏏ button
Pioneer
Display window
Remote sensor
Play/Pause ►/II button
Stop ■ button
Disc Side A/B button
Forward ►► ►►I button
Dimmer (FL DIMMER) button
Use this button to adjust the display window's brightness or to turn off the display.
Reverse I◄◄ ◄◄ button
⏻ STANDBY/ON switch
(Flat blade 2-pin AC plug model)
Power switch (POWER)
(Round blade 2-pin AC plug model)

■ DISPLAY WINDOW

When you press the FL DIMMER button, the brightness of the display window changes among the following settings.

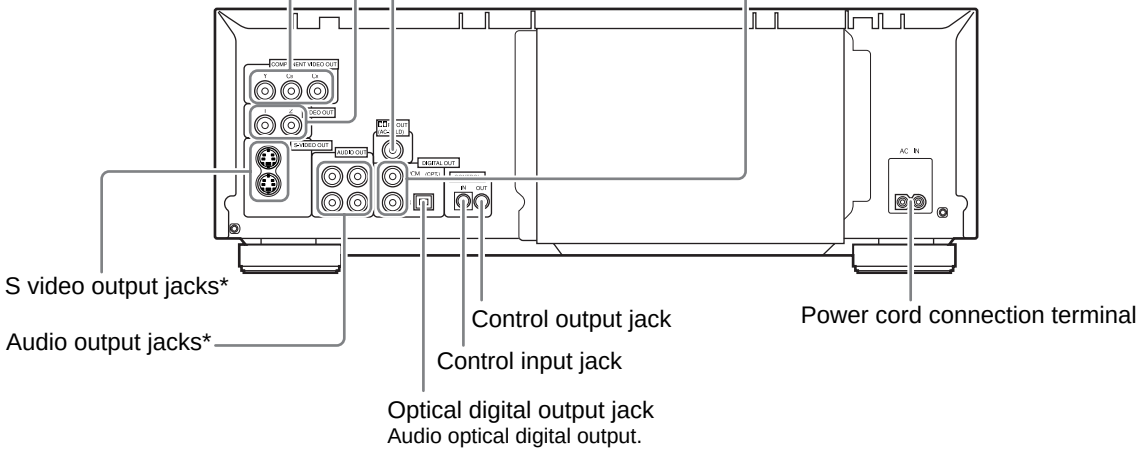
Bright → Semi-dark → Dark → off


Indicates location for Last Memory is being recorded in memory.
Indicates that playback settings (condition) have been memorized.
Indicates GUI operation is being performed.
Indicates Multi-Angle playback is in progress.
Indicates Dolby Digital playback
This lights during play of a disc with a sampling frequency of 96 kHz.
96 kHz
GUI
ANGLE
LAST MEMO CONDITION
DOLBY DIGITAL
TITLE
CHP/TRK
REMAIN TOTAL
Indicates that a title is being displayed
Indicates that a chapter/ track is being displayed
Indicates total playback time of side
Indicates the playback mode, title, type of disc, etc.
Indicates remaining playback time

■ REAR PANEL

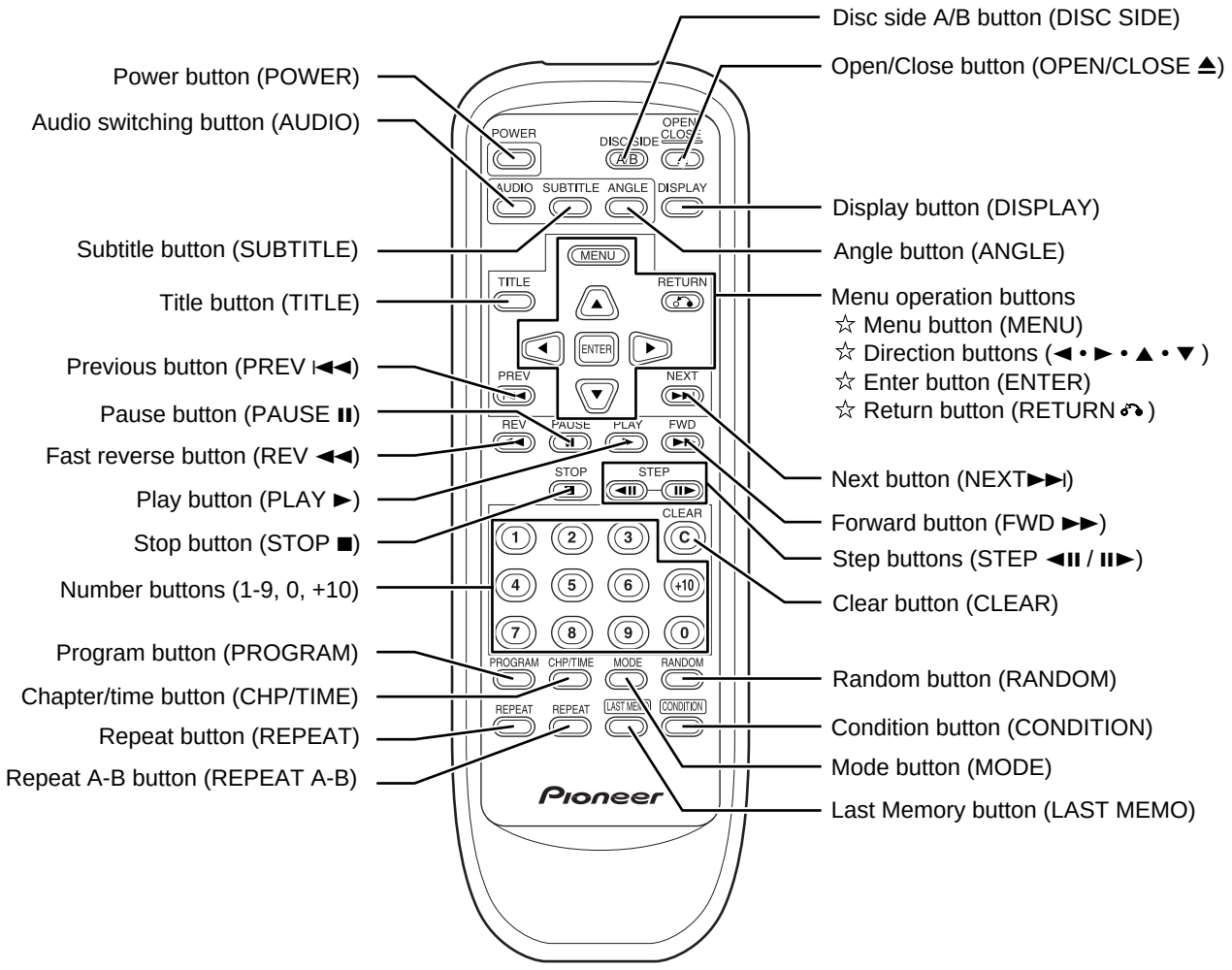
Digital output jacks (coaxial and optical)

These provide digital audio output. Select the digital output settings that best suit your amplifier.


Component video output jacks
Video output jacks*
Dolby Digital (AC-3) RF output (for LDs)
Coaxial digital output jacks
Use output jack 2 when connecting to an amplifier that supports Dolby Digital, MPEG, or DTS. Use output jack 1 (PCM) for all other amplifiers.
S video output jacks*
Audio output jacks*
Control output jack
Control input jack
Optical digital output jack
Audio optical digital output.
Power cord connection terminal

* There are two pairs of outputs, numbered 1 and 2, which can be connected at the same time. Connect jack 1 to a TV and jack 2 to an AV amplifier, for example.

■ REMOTE CONTROL

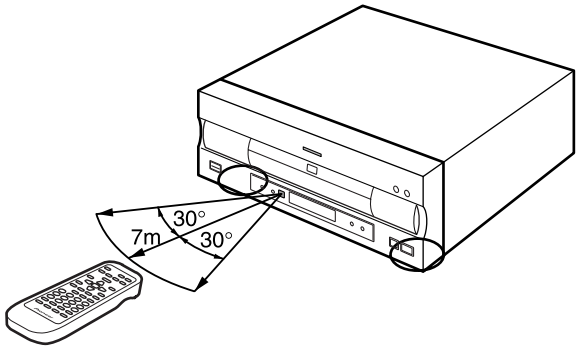


Buttons ilisted with ☆ mark are used for menu operation.

Remote control operation

When operating the remote control, point it at the remote sensor located on the player's front panel. The remote control can be used up to 23 feet (7 m) from the player and within a 30° angle from the middle of the sensor.

- Exposing the remote sensor to direct sunlight or strong light may cause faulty operation.
- If the CONTROL IN jack on the player's rear panel is connected to another component, point the remote control at that component to operate the player. The remote control will not work in this case when pointed at the player.



■ SPECIFICATIONS

General

System ..... DVD system, LaserVision Disc system and Compact Disc digital audio system
Power requirements ..... AC 120 V, 60 Hz
Power consumption ..... 48 W
Power consumption in standby mode ..... 5.1 W
Weight ..... 8.4 kg (18 lb 9 oz)
Dimensions ..... 420 (W) x 462 (D) x 146 (H) mm
(16 $^{9}/_{16}$ x 18 $^{3}/_{16}$ x 5 $^{3}/_{4}$ in.)
(Not including protruding cables, etc.)
Operating temperature ..... +5°C to +35°C (+36°F to +96°F)
Operating humidity ..... 5% to 85% (no condensation)

S-Video Output (2 pairs)

Y (luminance) - Output level ..... 1 Vp-p (75 Ω)
C (color) - Output level ..... 286 mVp-p (75 Ω)
Jacks ..... S-VIDEO jack

Video Output (2 pairs)

Output level ..... 1 Vp-p (75 Ω)
Jacks ..... RCA jacks

Component Video Output

(Y, C_B, C_R)
Output level ..... Y: 1.0 Vp-p (75 Ω)
..... C_B, C_R: 0.7 Vp-p (75 Ω)
Jacks ..... RCA jacks

Audio Output (2 pairs)

Output level
During audio output ..... 200 mVrms (1 kHz, –20 dB)
Number of channels 2
Jacks ..... RCA jacks

Digital audio characteristics (DVD fs=96kHz/24 bit)

Frequency response	4 Hz to 44 kHz (DVD fs: 96 kHz)
	4 Hz to 20 kHz (LD, CD)
S/N ratio	115 dB
Dynamic range	103 dB
Total harmonic distortion	0.002 %
Wow and flutter	Limit of measurement
	(±0.001% W. PEAK) or lower

Other Terminals

Optical digital output (AC-3/PCM) ..... Optical digital jack
Coaxial digital output (AC-3/PCM) ..... RCA jack
Coaxial digital output (PCM) ..... RCA jack
AC-3 RF output (for LD) ..... RCA jack
CONTROL IN ..... Minijack (3.5ø)
CONTROL OUT ..... Minijack (3.5ø)

Accessories

Remote control unit 1
AA (R6P) dry cell batteries 2
Audio cord 1
Video cord 1
Power cord 1
Operating Instructions 1
Warranty card 1

NOTE:

The specifications and design of this product are subject to change without notice, due to improvement.

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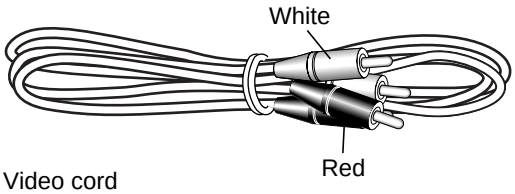
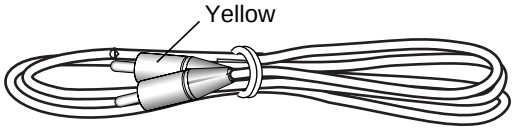
■ ACCESSORIES

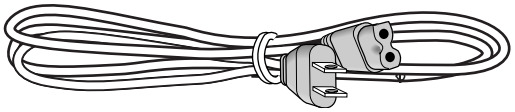
Audio cord
VDE1033 (L=1.5m)



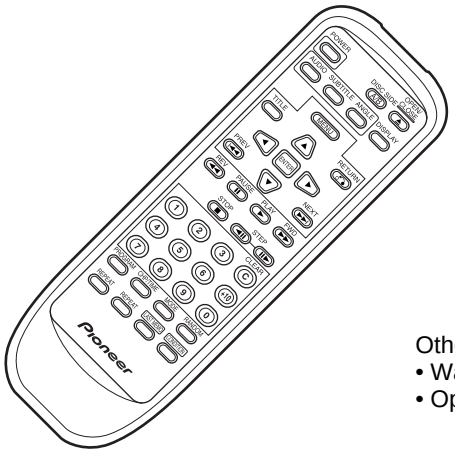
Video cord
VDE1036 (L=1.5m)



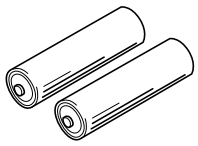
Power cord
ADG7021 (KU/CA type)
ADG7003 (RD/RA type)



Remote control unit
VXX2609 (CU-DV030)



Batteries(AA/R6P).....2



Other included items:
• Warranty card
• Operating instructions